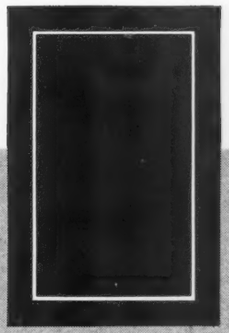
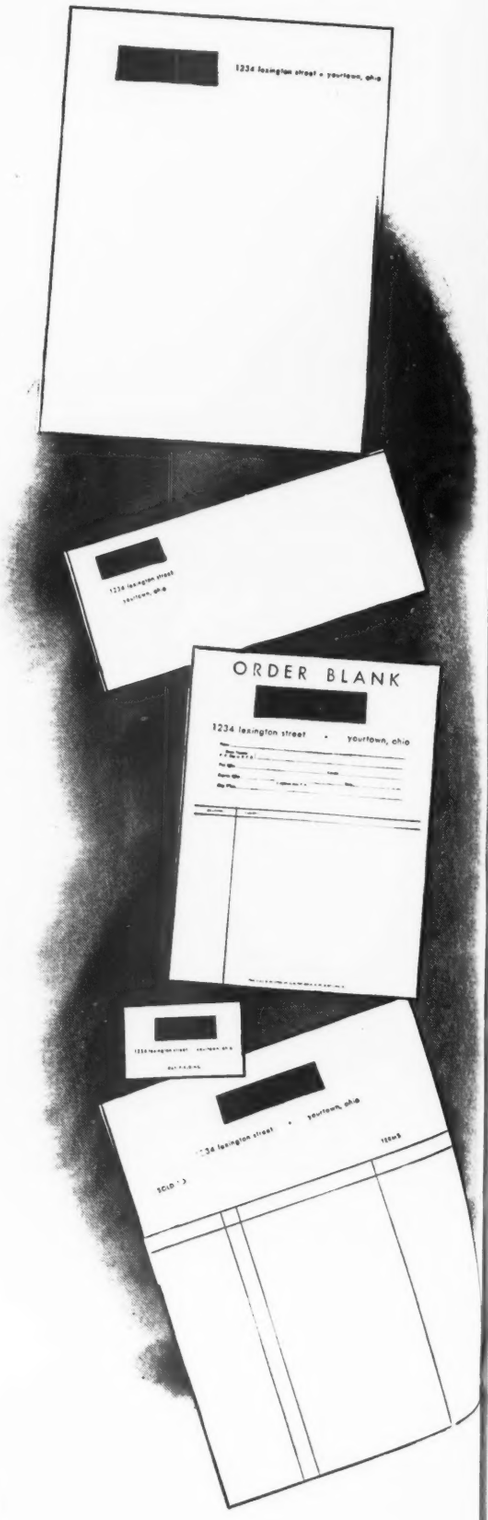
JUNE 1947



Engineer

HOW OFFSET LITHOGRAPHY SERVES INDUSTRY

Letterheads . . .



Shrewd businessmen regard their letterheads as being much more than a staple printing need for their business. Letterheads can be star salesmen . . . express dignity . . . have point-of-sale impact. They are frequently a company's main contact with customers. That's why you'll find most men willing to pay a little more for high-quality work.

Smart design, striking use of color, fine bond, and the value of an *outstanding reproduction job* are marks of quality that make letterheads tell, sell and create better impressions. It's a spot in which offset lithography stretches dollars farther. For instance, a lithographer is accustomed to running a whole series of matching forms at the same time . . . letterheads, statements, invoices . . . with savings in plate costs and press time and with greater color uniformity. Extremely fine line and halftone detail are possible.

For owners of the Harris 17x22″, single-color offset press, letterheads can be a full-time specialty or profitable fill-in job. Speedy, positive controls give the exacting color register required for letters—four form rollers make the inking system unique among small offset presses. In combination shops and small offset shops the 17x22″ does the lion's share of work. Large plants find it a most efficient stand-by unit.

You'll be delighted with samples of work on the 17 x 22 shown in a new 24-page, 4-color book. Send for it today. Ask for "Why Offset Lithography is On the March".

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"Totals* talk"... they say!

**Short for Miller Totalizer, a tamper-proof indicator which shows total press impressions since installation.*

DECIDEDLY! A Miller Totalizer *does* talk in terms of profit via millions of impressions. Take these random reports from customers, for example—typical evidence from pressrooms here and there. When all is said and done, these are the kind of totals that pay off handsomely year after year—and about which we gladly will tell you more—upon your request.

- A Washington, D.C. publishing company—6,500,000 impressions yearly average per each Miller Major for over 6 years.
- An Ohio folding box producer—over 9,500,000 impressions per press yearly average for 7 years from 4 27 x 41 Miller Automatics, including 2 Miller Cutter and Creasers.
- A New York general printing concern—4,500,000 sheets (9,000,000 impressions) yearly per press averaged from 8 Miller Two-Colors for 10 years.
- An Ohio specialty printer—nearly 6,000,000 impressions yearly average per press from a pair of Miller Simplexes for over 6 years.
- A Michigan commercial printer—over 5,000,000 quality sheets (10,000,000 impressions) average per press yearly for nearly 9 years, from 4 Miller Two-Colors.
- A Missouri carton company—5,000,000 impressions per press yearly average from 27 x 41 Miller Automatics, for 9 years, including a Miller Cutter and Creaser.
- An Ohio publishing concern—6,000,000 average sheets (12,000,000 impressions) yearly per press from 3 Miller Two-Colors, for over 7 years.
- A Pennsylvania box manufacturer—5,250,000 impressions averaged per press yearly for over 5 years from 4 Miller Simplex Automatics.

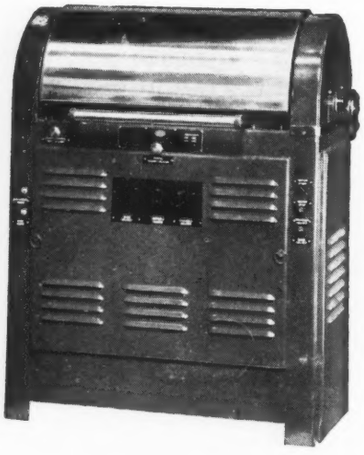
miller

MILLER PRINTING MACHINERY CO. PITTSBURGH 12 PENNSYLVANIA

STA-HI

THE PREMIER ROTARY SHAVER makes it possible for you to handle all your flat shaving work on one machine—and to handle it with accuracy, precision and speed that will delight the man who operates it, and please the mechanical executive interested in cutting production costs and getting a better printed product. The number of progressive newspaper and commercial plants who have chosen Premier is now approaching a total of 150 . . . Before you buy any rotary flat shaver, investigate Premier!

THE STA-HI MASTER FORMER is a real "veteran" when it comes to licking problems of handling dry mats in the stereotype department . . . Over a period of years these almost human machines have well earned their nickname—"Buckle Suckers" . . . Not only do they eliminate such troublesome buckles and other common mat face distortions—they completely process the mat when it comes from the molding operation, readying it for instant casting of better-printing plates . . .



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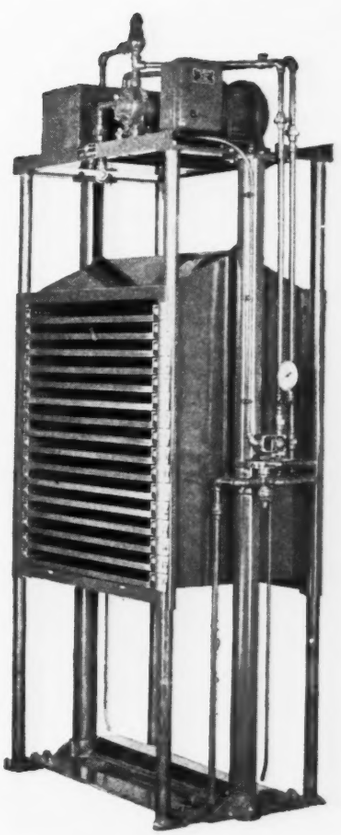
1020 Crocker Street

Los Angeles 21

STA-HI

THE STA-HI VACUUM FLAT CASTING BOX is now available for early delivery in a new post-war model that boasts many improvements and refinements . . . It is designed for easiest possible operation, comes equipped with two sets of gauges—shell and type high—that can be quickly changed . . . Sta-Hi was first in the field with a flat casting box applying vacuum to any size flat cast from one to eight columns in size . . . This new box carries on that tradition . . . See it at our ANPA Mechanical Conference booth!

THE STA-HI POWER LIFT FORM FILE for composing rooms is once again in production and a number of these time, money and space saving machines have been and are now being delivered . . . The new model has a simplified and more efficient hydraulic system and other improvements . . . If you have a traffic "bottleneck" in live page forms in your composing room, or are cramped for working space, the Form File is the answer to your problem . . . Prices are only slightly above pre-war level!



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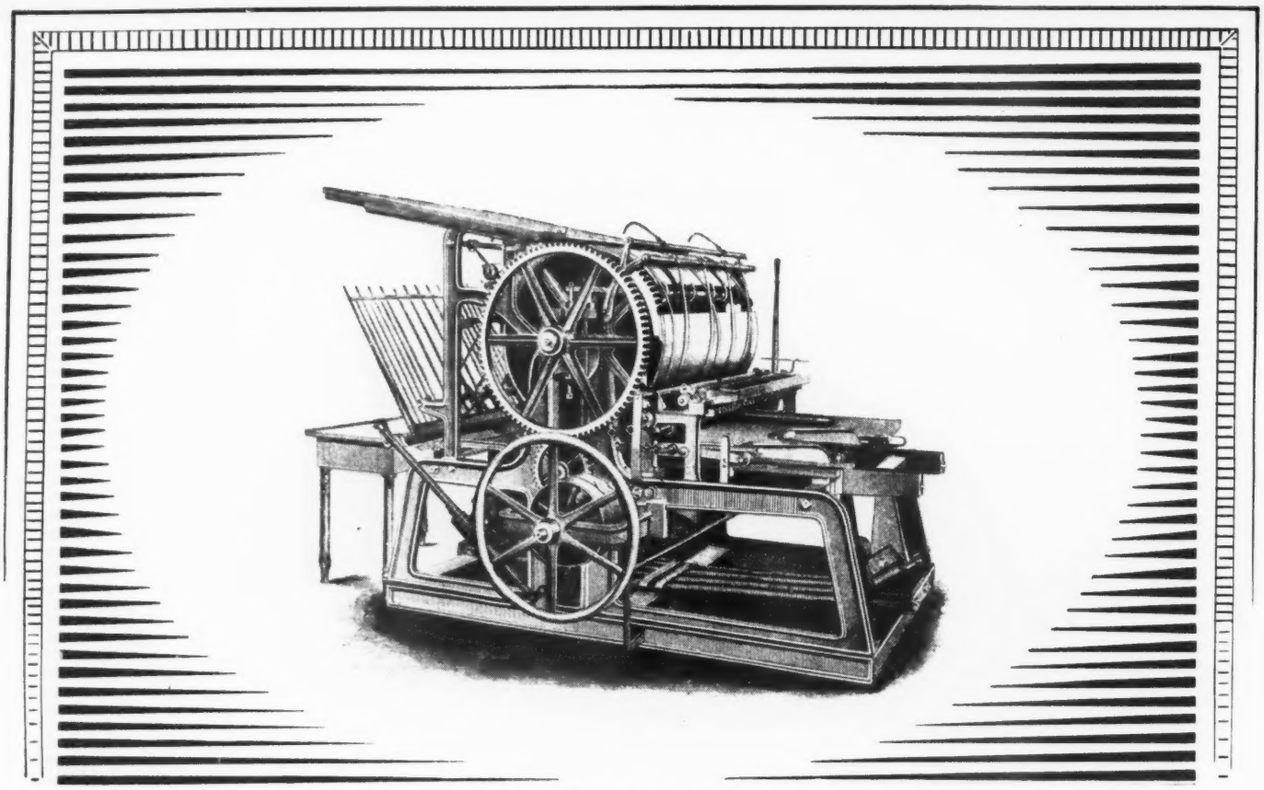
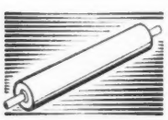


• SINGLE LARGE CYLINDER PRESS: Circa 1832 •

EVEN WHEN THE CYLINDER PRESS OPENED A NEW ERA OF SPEED

SAM'L BINGHAM'S SON MFG. CO. rollers

were already saving printers time



The cylinder press was invented by Frederick Koenig, of Saxony, in 1813. But the cylinder press was without practical value until the introduction of coated inking rollers much later. Koenig's press used plain iron rollers to distribute the ink.

The press pictured above, one of the earliest American cylinder presses designed in 1832 by Robert Hoe of New York, used paper grippers, an advancement of singular importance. It had a capacity of 1,800 impressions an hour, heralding a new age of speed.

Throughout this period of growing change—as now—SAM'L BINGHAM'S SON MFG. CO. worked closely with printers, trying constantly to develop better rollers to give clearer impressions, meanwhile saving them wastes of materials and time.

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PRINTING EQUIPMENT *Engineer*

Volume 74 Number 3

A technical publication for the mechanical executive responsible for printing production, equipment and supplies in the commercial, magazine, private plant and daily newspaper field.

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LEADING ARTICLES FOR JUNE 1947

ANPA Mechanical Conference Program 53

ANPA Mechanical Committee 54
Portraits of Members with Thumb-Nail Biographies of Some of The New Members

Consider the Specialist 57
(An Editorial)

Why The Stereotyper's Hair Turns Gray 58

Equipment and Supplies 59
Macbeth Transparence Chromocritic
Offset Press Booklet
Wade Gathering and Boxing Machines
Wade Multiple Pocket Greeting Card Gathering and Boxing Machine
Matrix Contrast Booklet
Linotype Slugs Serve as Memos
Colorful Offset Booklet
All Purpose Mailing System
Hoe Six-color Offset Press
Small Size Challenge Hi-Speed Quoin
Matrix Lug Tool 104
Combined Vacuum Cleaner and Blower 104

Plastic Plate Laminated from Thermoplastic Materials for Printing on Rotary Newspaper Presses 62

Electronic Drive System for Rotary Web Presses 64
By W. V. GOUGH

Protest against Poor Quality of Plastic Plates and Electrotypes Registered at Pacific Newspaper Mechanical Conference by Stereotype Clinic 66

Experience with Industrial Paper-handling Equipment in Chicago Printing Plant Related 69

Explanation of Eutectic Point in Type Metal 69

1947 Craftsmen's Convention at Saratoga Springs 70

New England Composing Executives Meet in Conference at Holyoke, Mass. 72

Testify Paper Shortage Calls for Long-Range Planning 76

Books Received 78
Type—for Books and Advertising
Touch System for Operators

Future of R.O.P. Newspaper Color Advertising Appraised 80

Executive Paragraphs 82

Patents for the Graphic Arts Field 83

Lusty is Demand for Letterpress Type of Rotary Magazine 92
Press Printing from Electrotype Plates

Steam Set Inks 96
By HERMAN A. SLATER

For Advertisers' Index, see page 104

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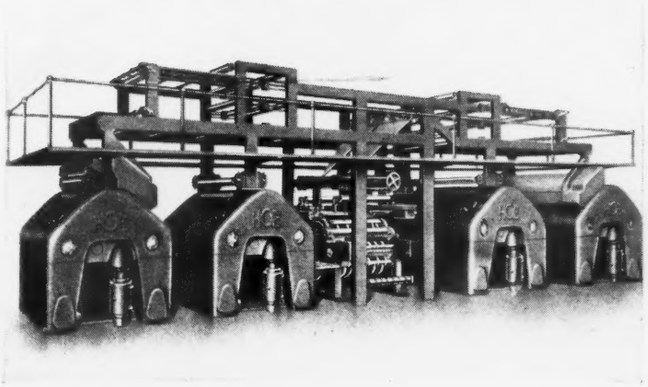

Hoe Color Convertible Newspaper Press— The cleanlined design of the new Hoe Color-Convertible Newspaper Press makes this ultra-modern model not alone more pleasing in appearance but simpler and safer to operate, easier to maintain, more convenient to expand. Pre-engineered so that additional color facilities can very easily be added at any time.

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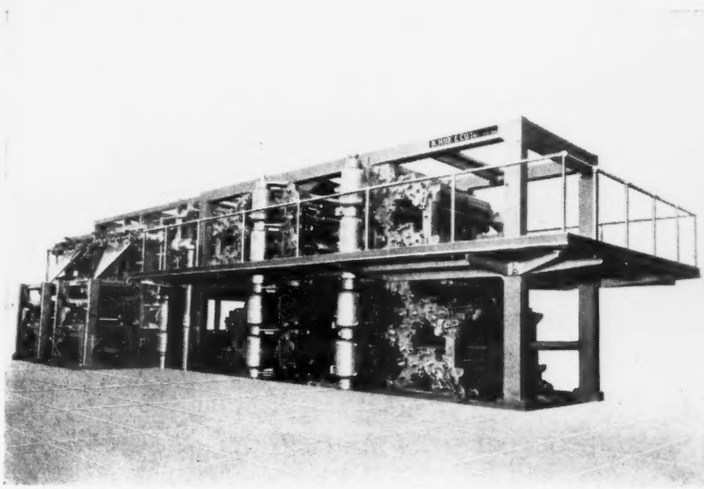
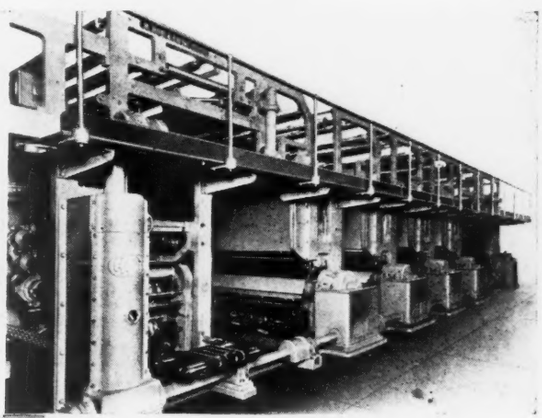
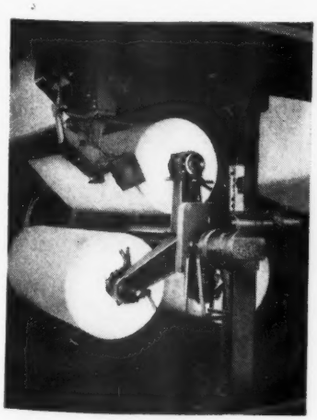


Hoe Multi-Color Newspaper Press— This close-coupled, multi-color press is designed for fast, economical, large-volume production of color supplements of all kinds.



Hoe Multi-Color Rotogravure Press —An advanced design with many new and exclusive features.



Hoe Streamline Reel, Automatic Tension and Full Speed Web Splicing Mechanism

This modern Hoe equipment permits maximum press production. Paper roll changes are made at full press speeds, production is uninterrupted, and paper wastage is minimized — a highly important factor in these days of high newsprint cost.

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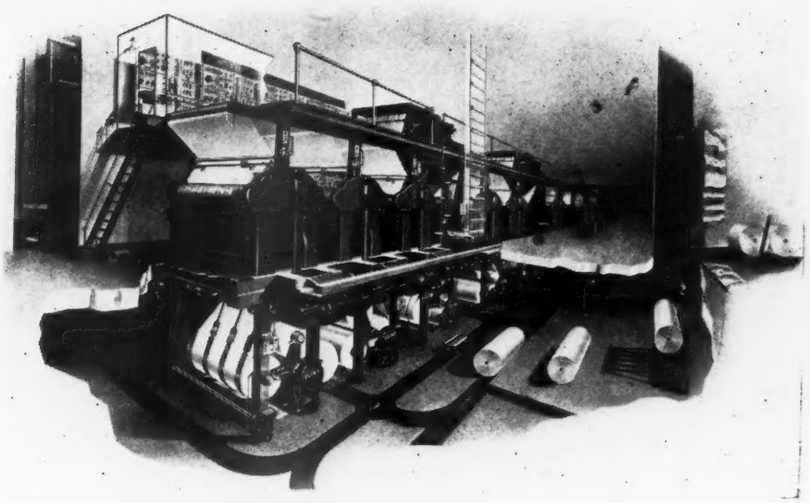

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Here are 8 tangible reasons why Cline alternating current, unit type press drives with full automatic push button control are standard equipment in many of the world's best equipped pressrooms.

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"FLECTO" felt is well bonded throughout and will not peel or separate in layers.

It is soft and pliable, assuring conformity to the mat and easy shrinking with the mat. Hundreds of users say "THERE IS NO BETTER BACKING FELT MADE."

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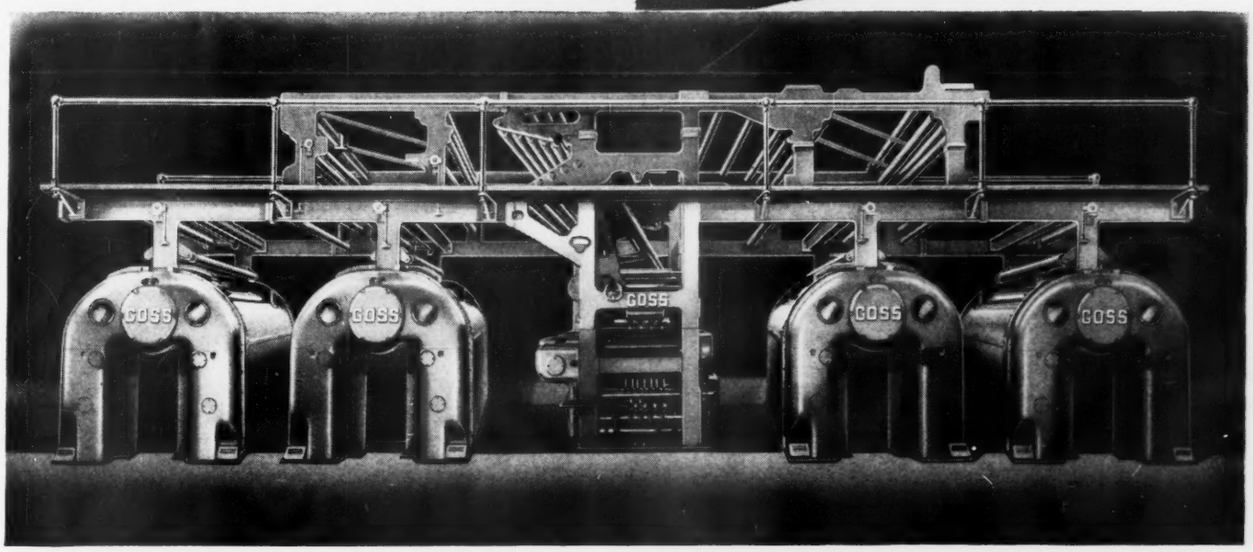


Handle them with ease on the HEADLINER...

More and more, the demand for *color* is building up to a "mechanical headache." Advertisers want it . . . readers like it—the advertising manager howls . . . the editor growls—but the harassed mechanical superintendent is often handicapped by limited facilities.

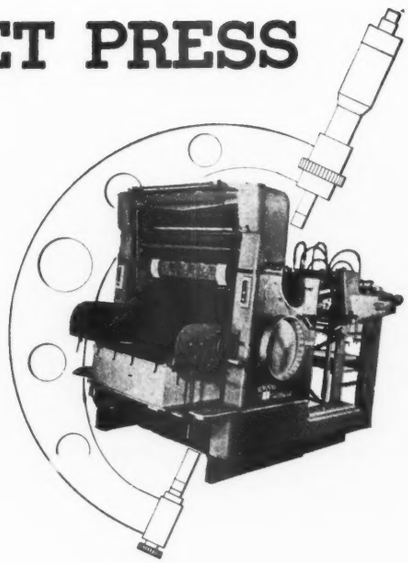
Most likely there's nothing that can be done about it immediately, but something can be done to relieve the situation in the future. Such as, submitting your color requirements to Goss for specific recommendations on press arangements.

The Goss HEADLINER Press offers the maximum in flexibility for R.O.P. color and is so designed that current requirements can be expanded at any time without major alterations. This can be done in several ways:—by merely reversing units with portable fountains . . . by adding color cylinders, etc. . . . or by a combination of these. Thus, the Goss HEADLINER will give you all the color facilities you desire and produce quality printing with one to four colors in register at the highest production speeds.

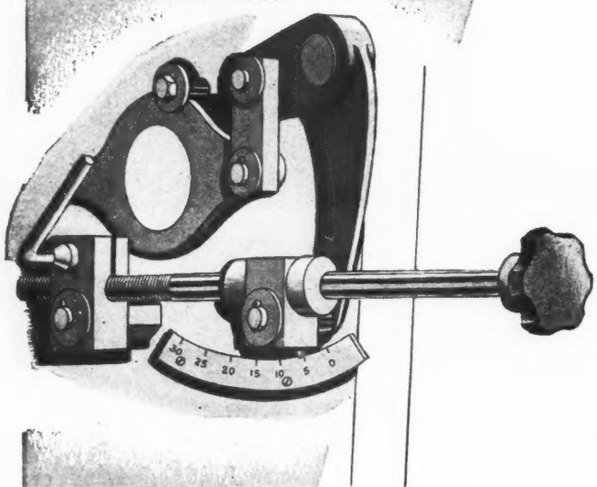
it's **GOSS** *again*

THE GOSS PRINTING PRESS COMPANY
1535 South Paulina Street
Chicago 8, Illinois
New York • San Francisco • Preston, England

EBCO *willard* OFFSET PRESS



Registers with Lithographers



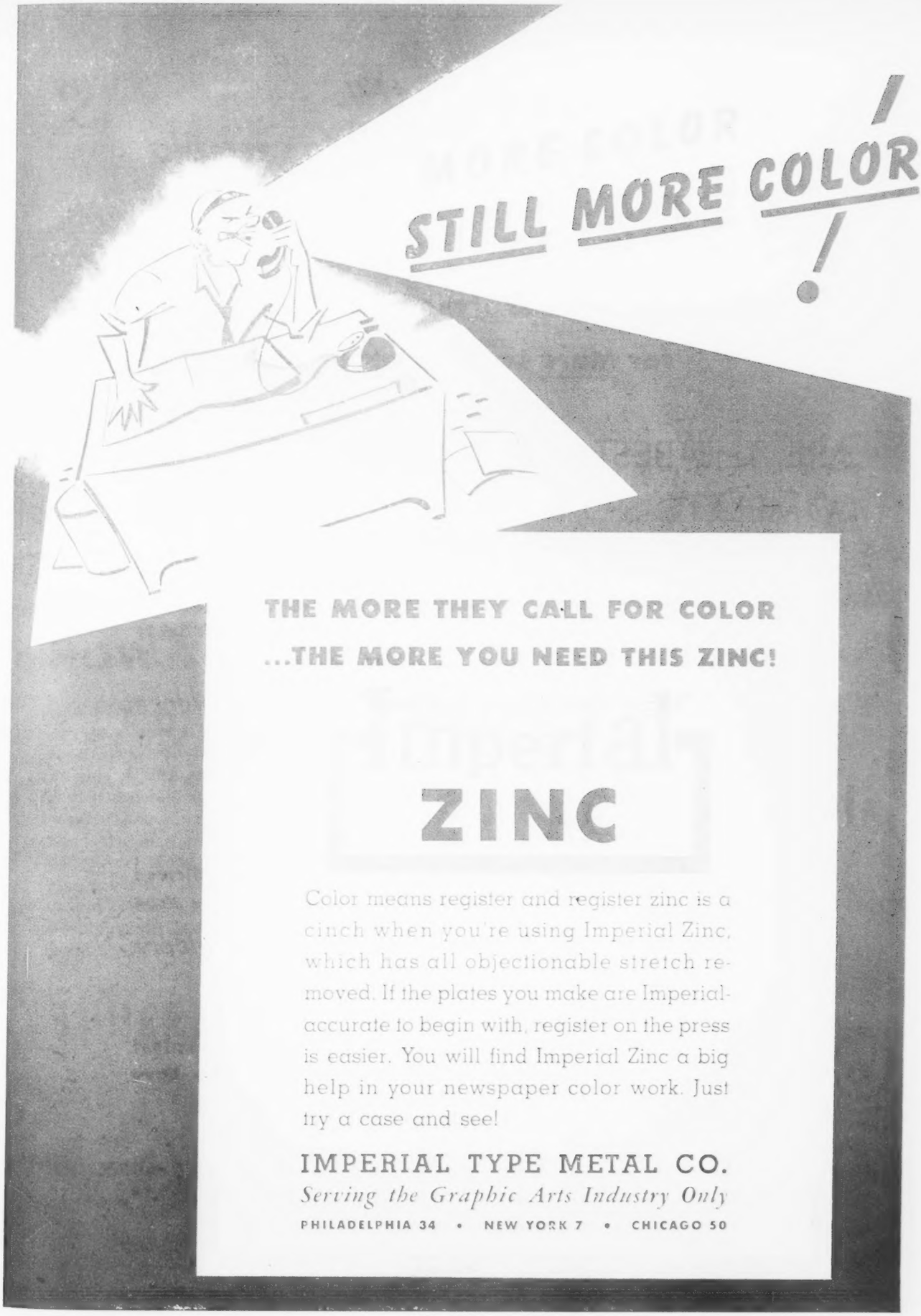
Accurate setting between blanket and impression cylinders for different thicknesses of stock is accomplished by operating one simple small hand wheel on operator's side of press. Setting indicated by calibrated scale and pointer.

THIS IS ONLY ONE OF THE MANY IMPORTANT FEATURES

FOR COMPLETE DETAILS SEND FOR BOOKLET. CLIP THIS COUPON TO YOUR LETTERHEAD.

EBCO *willard*

PRINTING MACHINERY DIVISION
ELECTRIC BOAT COMPANY
445 PARK AVENUE, NEW YORK 22, NEW YORK


STILL MORE COLOR!
THE MORE THEY CALL FOR COLOR
...THE MORE YOU NEED THIS ZINC!
ZINC
Color means register and register zinc is a cinch when you're using Imperial Zinc, which has all objectionable stretch removed. If the plates you make are Imperial-accurate to begin with, register on the press is easier. You will find Imperial Zinc a big help in your newspaper color work. Just try a case and see!
IMPERIAL TYPE METAL CO.
Serving the Graphic Arts Industry Only
PHILADELPHIA 34 • NEW YORK 7 • CHICAGO 50

"Exclusive with Scott"

REPEAT ORDERS

from present Users of the Latest Scott Presses

for More Latest Scott Presses

ARE THE BEST PROOF OF COMPLETE SATISFACTION

Users of 58 Latest Scott Units and 12 Sets Latest Scott Folders *now in completely successful operation* have placed orders for 58 additional Latest Scott Units and 13 Sets Latest Scott Folders, bringing their total purchases to

116 Latest Scott Units • 25 Latest Scott Folders

In Addition . . .

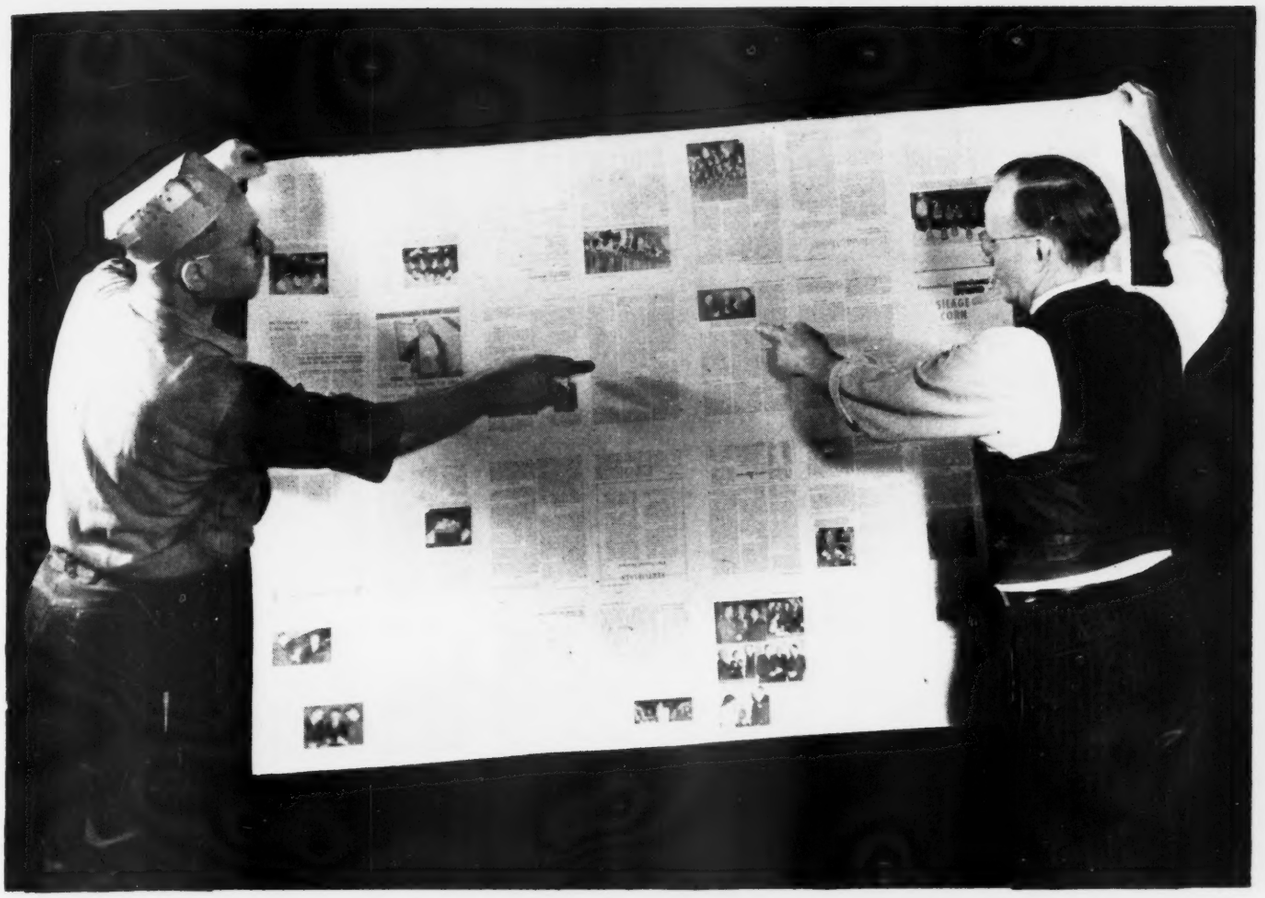
Users of earlier Scott Newspaper Presses have reaffirmed their confidence in Scott Presses by purchasing more than

100 Latest Scott Units • 20 Latest Scott Folders

These figures do not include contracts for many other Latest Scott Units and Folders ordered by Publishers who have purchased Scott Newspaper Presses for the first time.

WALTER SCOTT & CO., INC.

Plainfield, N. J.



HOW TO END OFFSETTING PROBLEMS

In hundreds of printing plants "SPHEREKOTE" Tympan Cover is providing a practical, easy-to-use answer to the problem of offsetting. Job press runs that ordinarily require over-night drying can be backed up 50 to 60% sooner without smudging. Rotary press runs can be handled at high speed without ink transfer and with fewer stops for tympan wash-up. The reason lies in "SPHEREKOTE'S" glass sphere-coated surface which gives *point contact* with freshly printed areas. As a result, ink pick-up is reduced and ink transfer practically eliminated. Fewer wash-ups are required, and wash-up time is reduced . . . because "SPHEREKOTE" cleans as easily as a plate glass window.

"SPHEREKOTE" is available in sizes to fit every press, from the smallest jobber to the largest rotary, and in weights to suit every type of work. If you haven't learned from first hand experience how much pressroom time it saves, your name on the coupon below will bring you some interesting facts about the results other printers are securing.

"SPHEREKOTE" TYMPAN COVER

Made in U. S. A. by

MINNESOTA MINING & MFG. CO.

THE 3M COMPANY

SAINT PAUL 6, MINNESOTA

Minnesota Mining & Mfg. Co. PE 647
St. Paul 6, Minnesota
Please send us information on your "SPHEREKOTE" Tympan Cover

for_____ Presses.

Name_____

Firm_____

Address_____

City_____ Zone____ State_____

Cut Mounting Is Easy

With Booth's Zink Cut Cement

You can mount them quicker and eliminate risk of out-of-position cuts with this reliable, special-purpose adhesive. Booth's Zink Cut Cement sets up quickly . . . holds fast and comes in a tough, ready tube dispenser. Get a supply . . . discover for yourself how fast cut mounting can be with Booth's Zink Cut Cement.

PRICES: In the United States: 75c per tube, $6.00 a dozen tubes, $5.00 a dozen in gross lots.

PRICES: $1.45 per pair
$7.75 per dozen

Operators and Machinists Like Them

Sure, Booth's Black Rubber Rolls are favorites among line-casting machine operators and machinists the country over. That is because they give sweet performance, are long wearing, responsive and provide maximum cam tread friction. When Booth's Black Rubber Rolls are on your machines, you'll see why they are so popular. Get a supply.

E. A. BOOTH RUBBER CO.

MAHONING BANK BUILDING YOUNGSTOWN, OHIO

$1.74½ Per Machine Per Year*

OPERATING ECONOMY LIKE THIS CANNOT BE APPROACHED ...LET ALONE EQUALLED ... BY ANY SAW TRIMMER EXCEPT THE "C & G"

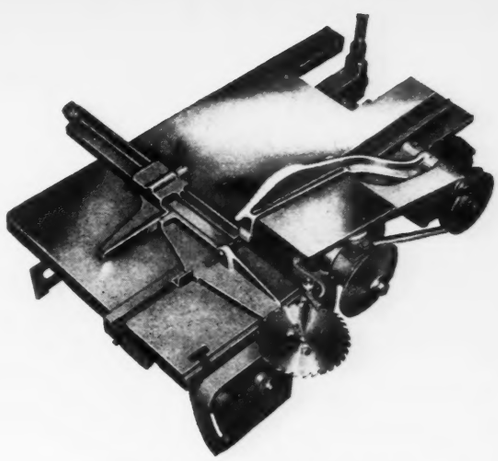
85 C & G Saw Trimmers in service in 10 leading metropolitan newspapers for an average of 6½ years per machine—548 years all told!—have cost a total of only $953.54 during this period for replacement parts and repairs—only $1.74½ per machine per year!

IN ADDITION to this amazing economy story, these same 10 newspaper plants report using an average of only ONE C & G Universal Saw Blade per machine per year. Because these blades are sharpened with the C & G Saw-Sharpening Attachment, no chargeable time was required for this operation. Compare this, please, with the $1.00 per week—$52.00 per year—sharpening costs by conventional methods, using swedge blades!

** RESULTS Reported By These Ten Metropolitan Newspapers:*

CINCINNATI POST CLEVELAND PLAIN DEALER DETROIT NEWS INDIANAPOLIS STAR MILWAUKEE JOURNAL NASHVILLE BANNER PITTSBURGH PRESS ST. LOUIS GLOBE-DEMOCRAT ST. LOUIS POST-DISPATCH NEW YORK WORLD-TELEGRAM.

IN THE FACE of **proven** maintenance economy records like these, you **cannot afford** to own any other Saw Trimmer than the famous "C & G". See the newest models on display at the A.N.P.A. Conference.



Saw Blade Grinding Attachment

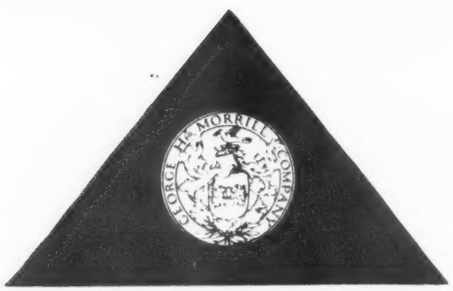
The MORRISON Company

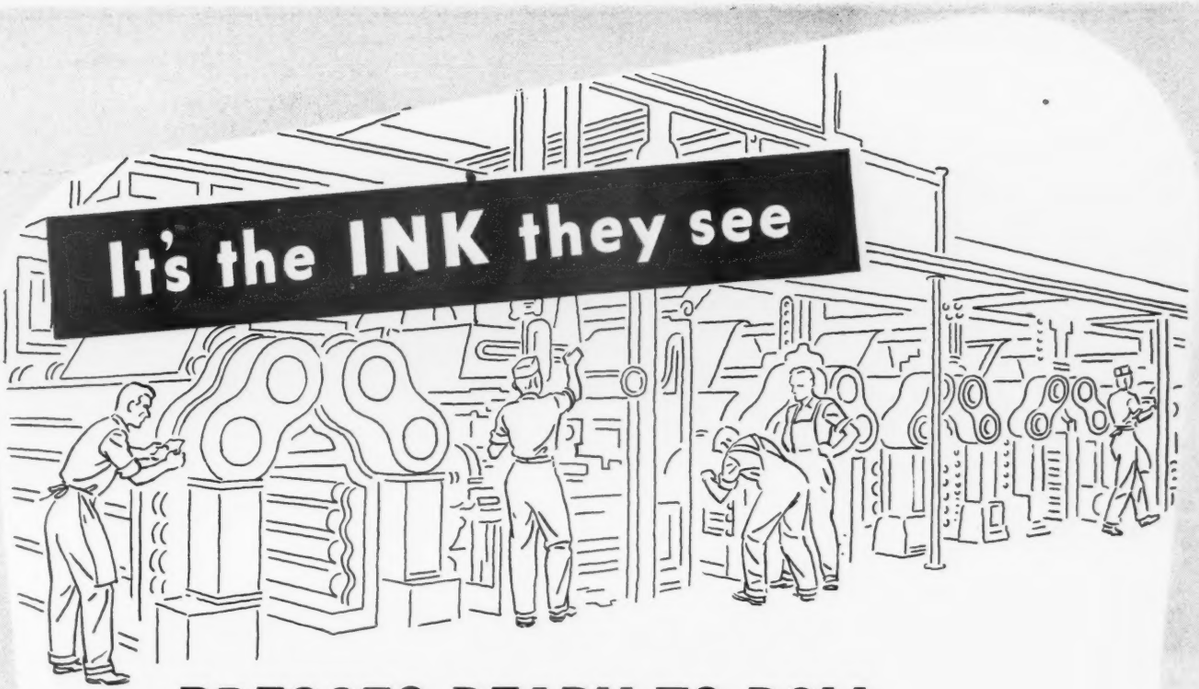
(Formerly Milwaukee Saw Trimmer Company)

MORRILL

•

World's Largest Newspaper Ink Manufacturer





PRESSES READY TO ROLL...

☆ *World news from the wires—*

☆ *Local stories by your reporters—*

☆ *Pictures taken by your photographers—*

☆ *Your composing room has set the copy—and the stereotypes are cast and on the presses—ready before the DEADLINE.*

To give the public a finished newspaper, you need only a few cents worth of ink per 1,000 eight-page papers, and "It's the INK They See!"

Don't be satisfied with anything but the finest ink and the surest service.

Geo. H. Morrill, world's largest newspaper ink manufacturer, has a coast-to-coast organization to serve you. The Morrill process of ink manufacture gives assurance of finest quality. You can't beat Morrill for a high grade newspaper ink—in black and colors.

GEO. H. MORRILL

GENERAL PRINTING INK DIVISION

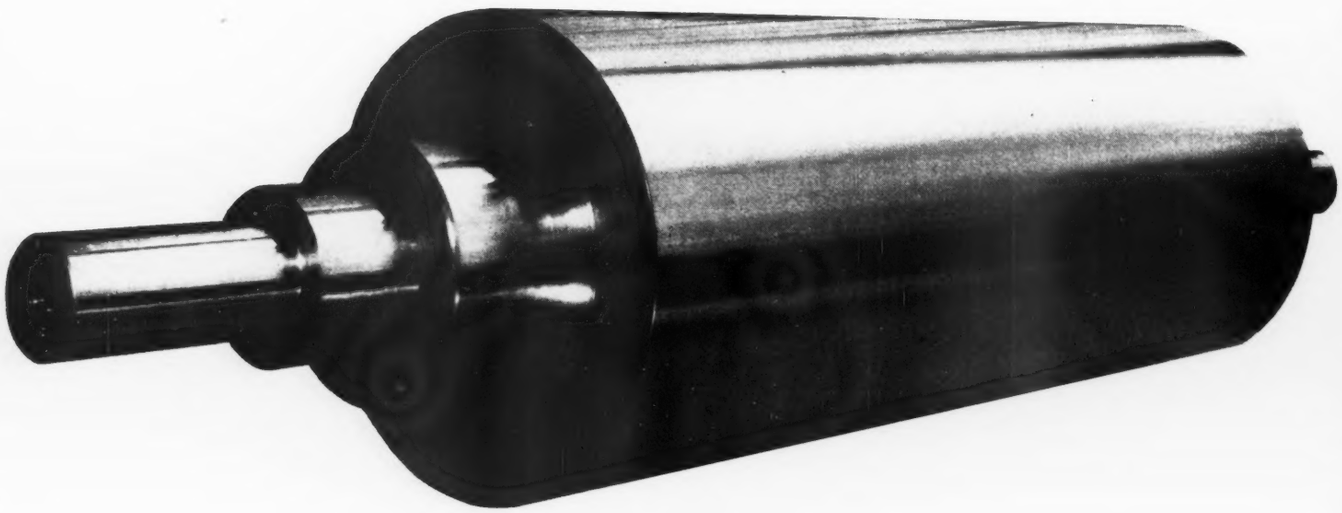
100 SIXTH AVENUE, NEW YORK 13, N. Y.

FACTORIES: *NORWOOD, MASS. · CHICAGO, ILL. · TACONY, PA. · SAN FRANCISCO, CAL. LOS ANGELES, CAL.*

BRANCHES: *BOSTON · NEW YORK · CHICAGO · PHILADELPHIA · DETROIT · ST. LOUIS FORT WORTH · SAN FRANCISCO · ST. PAUL · LOS ANGELES · SEATTLE · TORONTO*

Sun CHEMICAL CORPORATION

PRECISION ROLLS



PRODUCERS OF PLATE CYLINDER BODIES — GRAVURE — INK —

FEED — FOUNTAIN AND IMPRESSION CYLINDERS —

CENTRIFUGALLY CAST FOR STRAIN-FREE STRENGTH —

ACCURATELY MACHINED FOR SPLIT THOUSANDTH PRECISION —

DYNAMICALLY BALANCED — ELECTRONIC METHOD —

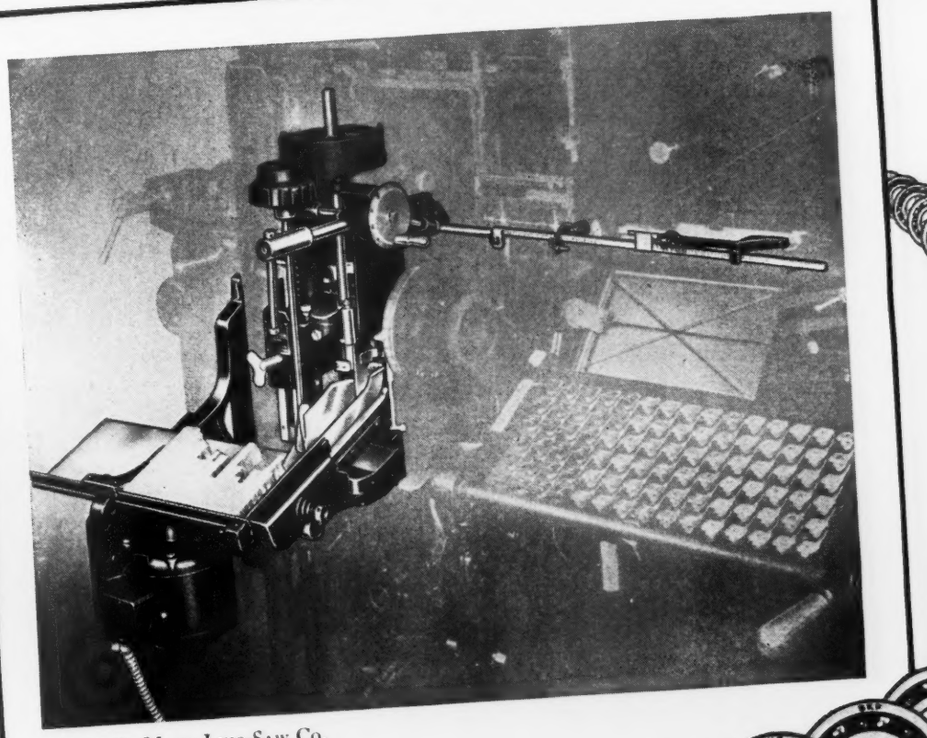
FOR VIBRATIONLESS ROTATION.

★

Send for pamphlet or furnish us drawings for estimate on your needs.

FLORENCE PIPE FOUNDRY AND MACHINE COMPANY

FLORENCE, BURLINGTON COUNTY, NEW JERSEY



● *Built by* MOHR LINO-SAW CO.

SKF
SKF
SKF

AUTOMATIC
AUTOPLATE
TENSIONPLATE
AUTOSHAVER
HEAVY DUTY
AUTOSHAVER
STANDARD
AUTOSHAVER
WOOD
COLOR PLATE
PRE-REGISTERING MACHINE
Wood
NEWSPAPER
MACHINERY
ALSO VACUUM CASTING EQUIPMENT

STANDARD EQUIPMENT

Many **of these machines you have known for years**

Others **are brand new**

All **of them are WOOD Developments**

WOOD NEWSPAPER MACHINERY CORPORATION

Plainfield, N. J. • New York Office, 501 Fifth Avenue

Does history repeat itself--?
The New York Times.
"All the News That's Fit to Print."
THE WEATHER
FIVE CENTS
BROTHERHOODS DEMAND GOVERNMENT OWNERSHIP OF ROADS AND A SHARE IN THE PROFITS, FOLLOWING STRIKE THREAT; FIGHT TO CUT COST OF LIVING KEEPS HOUSE IN SESSION
SERVE NOTICE ON CONGRESS
VOLSTEAD DRY BILL UNCONSTITUTIONAL IN ROOT'S OPINION
LEAGUE IS RUSSIA'S HOPE, SAYS FRANCIS
BELA KUN OUSTED; MODERATES TAKE HUNGARIAN RULE

Dayco Printing Roller Experience goes back to 1919, too!

The tempo of newspaper presses is a lot faster since the days, 28 years ago, when they rolled out the news that the nation's railroads were at a standstill . . .

During those years, Dayton was in the midst of perfecting natural rubber printing rollers—newspaper rollers that would take special inks, that wouldn't melt in the summer or crack and chip in the winter. These years of constant research got results. In 1926, Dayton took out the first patent on renewable surface printing rollers. Later, in 1933, the first synthetic rubber newspaper roller was created by Dayton—the first roller able to stand the gaff of today's high-speed presses.

Newspapers the world over are now relying on Dayco synthetic and natural rubber newspaper rollers for high speeds, in all positions on any type of press.

For better service, we suggest Dayco—for over a quarter century the experienced roller that's first on the press! For complete details, just write Dayco Division, Dayton Rubber, Dayton, Ohio.

1919-1947 *over a quarter of a century of printing roller experience*

Dayton Rubber

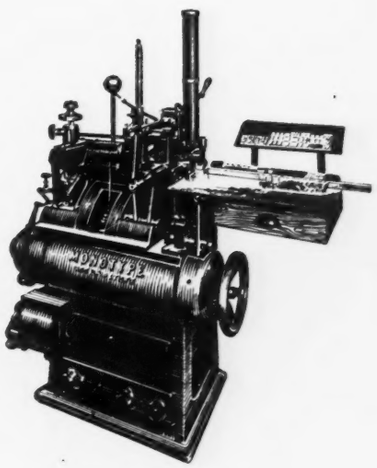
THE MARK OF TECHNICAL EXCELLENCE IN NATURAL AND SYNTHETIC RUBBER

SELL MERCHANDISE!

Give the buyer of your advertising space the greater selling power of good typography. Make your display advertisements attractive, clear-cut and simple, properly balanced and legible, using appropriate modern type faces in harmony with illustrations and text—to invite reading, hold attention, stimulate desire and secure action.

Set Display Ads in Single Types

Hand composition of single types alone provides that flexibility in selecting the right sizes of appropriate type faces and ornaments—relating them to each other and to the space occupied—essential to good typography. It has been proved many times by tests on live copy during actual composing room operation that no other method of setting display advertisements is so fast as hand work from full cases and racks. When Monotype type and spacing material are available in unlimited supply the best typography is combined with speed and economy in production.



MONOTYPE GIANT CASTER
Makes Type and Precision Furniture in sizes from 14 to 72 pt. inclusive.

Profit by Non-Distribution

The Monotype system of non-distribution makes available all traditional and modern type faces generally used in advertising typography. It provides ample resources to meet peak loads and unexpected demands. It gives continuous production with a minimum of non-productive time. It assures an unlimited supply of new type, borders, rules, leads and slugs at all times. It produces the greatest volume of display linage at the lowest cost. It offers a dependable method of advertising composition; makes non-distribution complete.

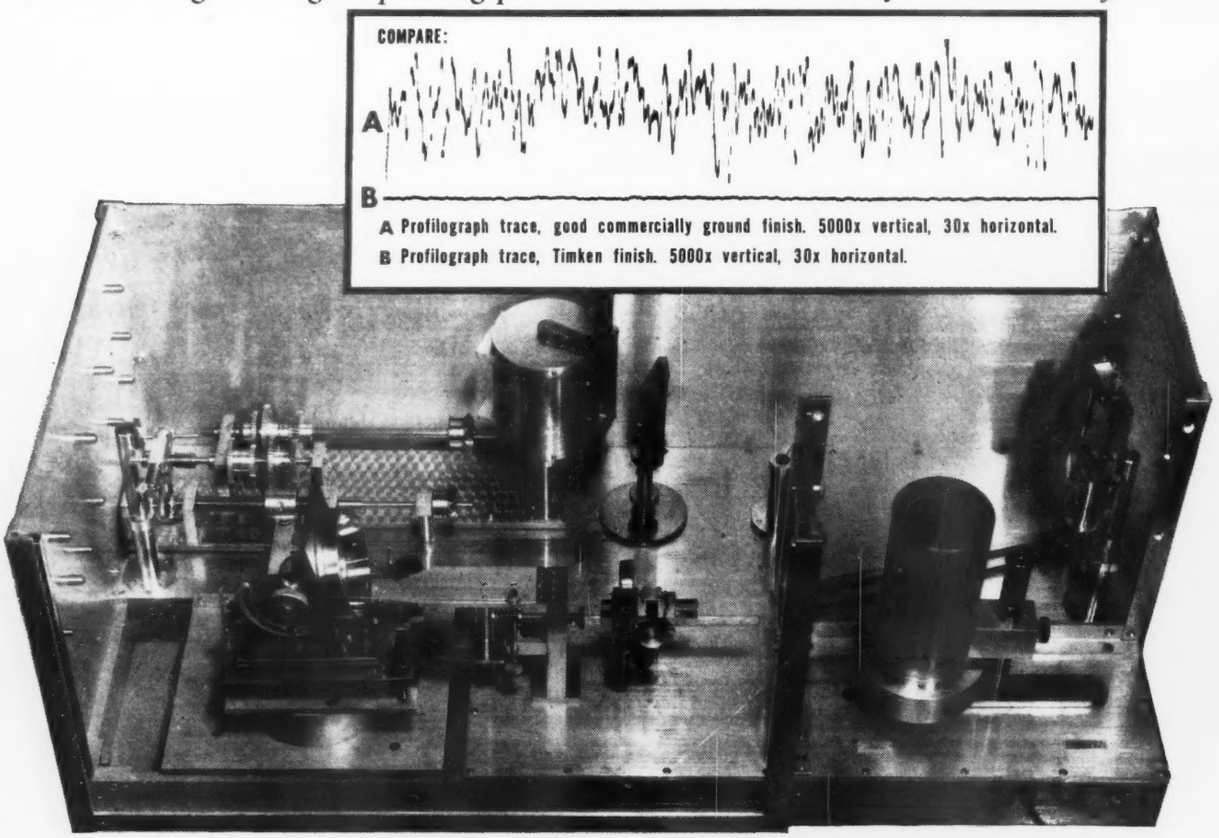
MONOTYPE MATERIAL MAKER
Makes Rules, Decorative Borders, Leads and Slugs and Cut-Mounting Base in various sizes up to 36 pt.

NON-DISTRIBUTION MEANS NO DISTRIBUTION AT ANY TIME

LANSTON MONOTYPE MACHINE COMPANY

MONOTYPE BUILDING, 24TH AND LOCUST STREETS, PHILADELPHIA 3, PENNA.

Timken bearings make good printing presses better . . . here's one of the reasons why:


COMPARE:
A
B
A Profilograph trace, good commercially ground finish. 5000x vertical, 30x horizontal.
B Profilograph trace, Timken finish. 5000x vertical, 30x horizontal.

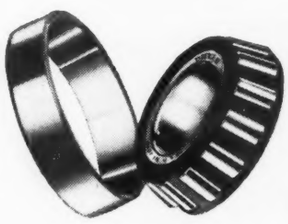
Answers the question— "How rough is smooth?"

ONE of the reasons Timken tapered roller bearings perform with such frictionless, wear-free ease is the amazingly smooth surface finish on the rolls and races —the finest known to modern bearing science.

Now, when you talk about finishes like this, you're talking about surface irregularities of only a few millionths of an inch—irregularities which are impossible to detect by any ordinary means. So, when Timken first began to develop this finish, one of the biggest obstacles was the absence of an accurate method of measuring the roughness of an apparently smooth surface.

The profilograph pictured above was the answer. Developed by Timken in 1928 and steadily improved since then, the profilograph determines surface irregularities to within one-millionth of an inch. Equipped with this measuring stick, Timken engineers were able to develop new finishing methods and machines, which have resulted in the microscopic surface accuracy of the Timken bearings you use today.

Every factor in the efficiency of a bearing is approached at Timken in this same scientific manner. For example, Timken makes its own steel to assure constant quality. And Timken is the acknowledged leader in: 1. advanced design; 2. precision manufacture; 3. rigid quality control; 4. special analysis steels. No wonder you can always be sure of uniformly top quality and performance in the Timken bearings you use. The Timken Roller Bearing Company, Canton 6, Ohio.



TIMKEN

TRADE-MARK REG. U. S. PAT. OFF.

TAPERED ROLLER BEARINGS

NOT JUST A BALL ○ NOT JUST A ROLLER ⬭ THE TIMKEN TAPERED ROLLER ⬭ BEARING TAKES RADIAL ◎ AND THRUST →◎← LOADS OR ANY COMBINATION →✳←

ESPECIALLY TESTED AND PERFECTED FOR BETTER NEWSPAPER PRINTING

They're specially built for the job. That's why AMERICAN SYNTHETIC RUBBER ROLLERS have been so signally successful. On hundreds of newspaper, magazine, rotary and offset presses they're rendering splendid performances every day . . . showing exceptional endurance, remarkable ink-distributing ability and a definite faculty for producing sharp impressions. Too, they're proving they don't lip; hold diameter perfectly in heat, cold, humidity; set easily and stay set. All in all, they're great rollers. Order a set . . . you'll like them.

AMERICAN ROLLER CO.

1342 N. Halsted St., CHICAGO 22, ILL.
225 N. New Jersey St., Indianapolis 4, Ind.

American SYNTHETIC RUBBER Rollers

REDUCE Metal Costs

and still retain PRINTING QUALITY

IT COSTS YOU $70 to $80 a ton to recondition or "rerun" your type metal. Keep this cost to a minimum —and still retain high quality in your printing—by installing MONOMELT in your composing room. Take advantage of this system that has been so successful in commercial printing plants, trade composition shops, publishing houses and newspapers during the past 25 years.

WHAT MONOMELT DOES FOR YOU

The MONOMELT System keeps metal in balance longer, cuts dross loss and makes frequent reconditioning of type metal unnecessary. With MONOMELT, you can use type metal over and over, and still get hard, clean type for sharp reproduction.

MONOMELT will mean even greater savings to you *now*, with prices sky-high for new metal as well as for reconditioning old.

WRITE TODAY
for New Illustrated Bulletin

MONOMELT

Offers a complete system for handling type metal through its entire composing room cycle. (1) Dead metal is killed out into handy metal scoops. (2) Scoops are transferred to cabinet near machine operator. (3) Scoops are emptied into MONOMELT crucible which fits directly on type-casting machine. Here metal is melted at controlled low temperature, cleaned and fed into the machine pot, ready to cast into type. Investigate this tested system of maintaining printing quality and cutting type metal costs.

THE

MONOMELT CO., Inc.

1611 N. E. POLK STREET MINNEAPOLIS 13, MINNESOTA

Ayer Cup to **CONSISTENT USER** **OF HERRICK INK** *Rutland Herald*

Congratulations, Rutland (Vt.) Herald! By winning the F. Wayland Ayer Cup, highest recognition in the 17th Annual Exhibition of Newspaper Typography, you are definitely established as a paper of unusual excellence.

To be judged the best of over 1,000 English-language dailies — regardless of format or circulation — is an achievement of which you may well be proud. This award is a fitting climax to the five Honorable Mention Certificates in the 10,000 to 50,000 circulation class, won since 1938. It proves beyond question that your paper has consistently improved in typography, makeup and press work.

The fact that you have been a consistent user of Herrick News Ink — "tailor-made" to press room requirements — since your first award, is a source of gratification to us.

To other papers we recommend the fine performing ink that helps attain the ultimate in clear, clean-cut appearance. HERRICK will be glad to study your press room problems and formulate a news ink for your particular requirements . . . an ink which makes consistent excellence possible, year after year.

Ask a HERRICK representative to call . . .

RUTLAND HERALD
Truman Asks 400 Million For Greece, Turkey, Calls on U. S. To Save "Peace of the World"
House Approves Bill Revamping Welfare Set-Up
Award
Award
Award

HERRICK Inks

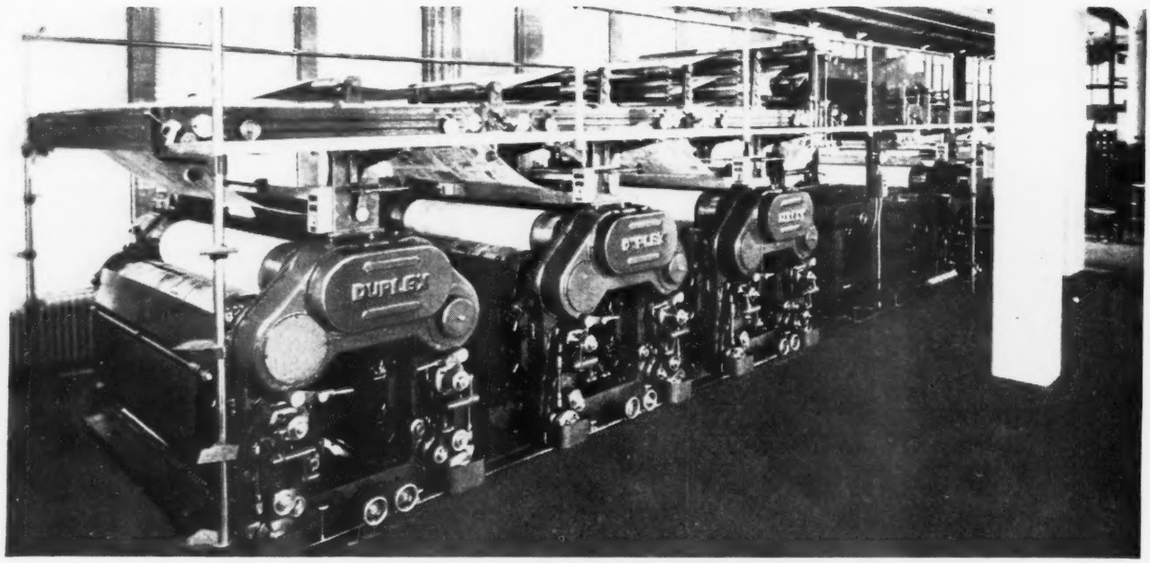
William C. Herrick Ink Co., Inc.

Main Office & Plant

EAST RUTHERFORD • NEW JERSEY

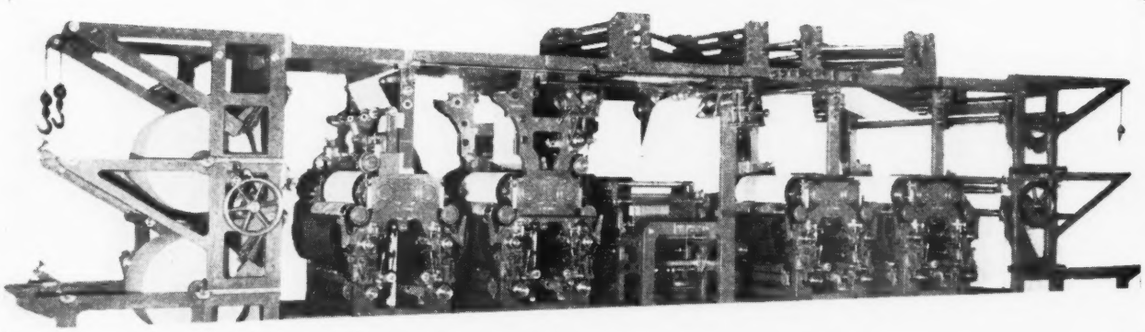
2993

. . DUPLEX



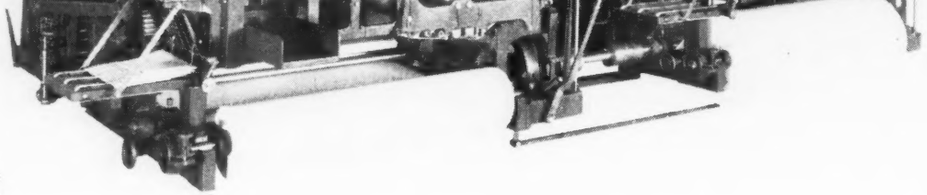
DUPLEX HIGH SPEED ARCHED TYPE PRESS

Has steel cylinders, steel gears, ball and roller bearings and many other construction features for quality printing and trouble-free operation. World's finest semi-cylindrical newspaper press.



DUPLEX UNITUBULAR PRESS

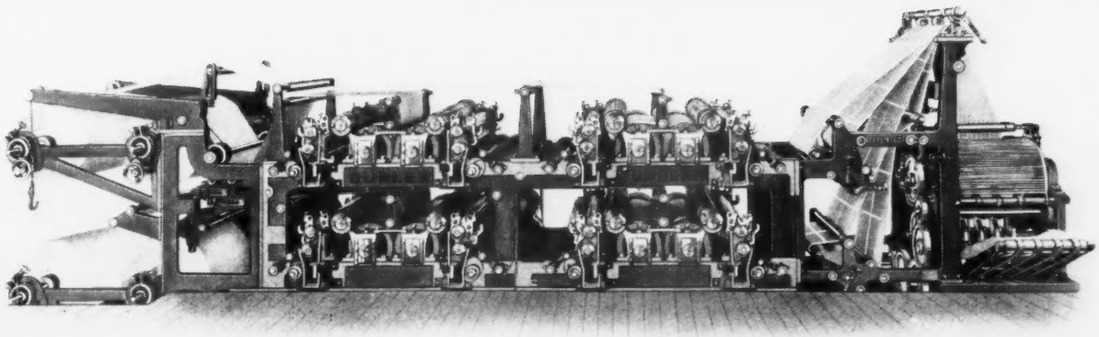
Gives high speed operation from one set of plates. Has steel plate cylinders and anti friction bearings. Unit shown has single color cylinders. Double color cylinder equipment can be added at option.



DUPLEX TWINNED FLAT BED PRESS

Handles up to 16 pages efficiently. Single press handles up to 8 pages.

EQUIPMENT



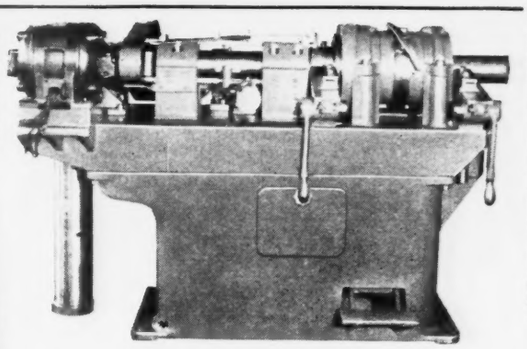
DUPLEX STANDARD TUBULAR PRESS

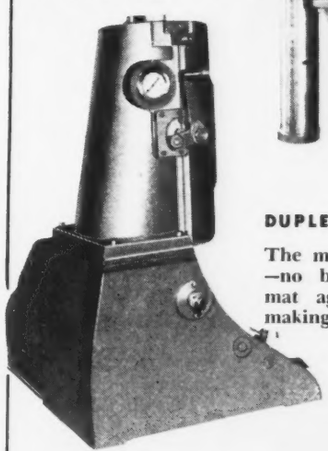
DUPLEX

STANDARD PARTS AND A COMPLETE LINE OF STEREOTYPE EQUIPMENT, ROUTERS, SCORCHERS, ETC., ARE AVAILABLE FOR SEMI-CYLINDRICAL AS WELL AS **DUPLEX** TUBULAR PRINTING EQUIPMENT

DUPLEX TUBULAR FINISHING MACHINE

It takes but a few seconds for this combination machine to cut off the tail, bevel both ends, and bore the inside of the plate to correct size.





DUPLEX TUBULAR VACUUM CASTING BOX

The modern method for making better plates —no buckling of the mat—suction holds the mat against the box smoothing it out and making the plates true and uniform.

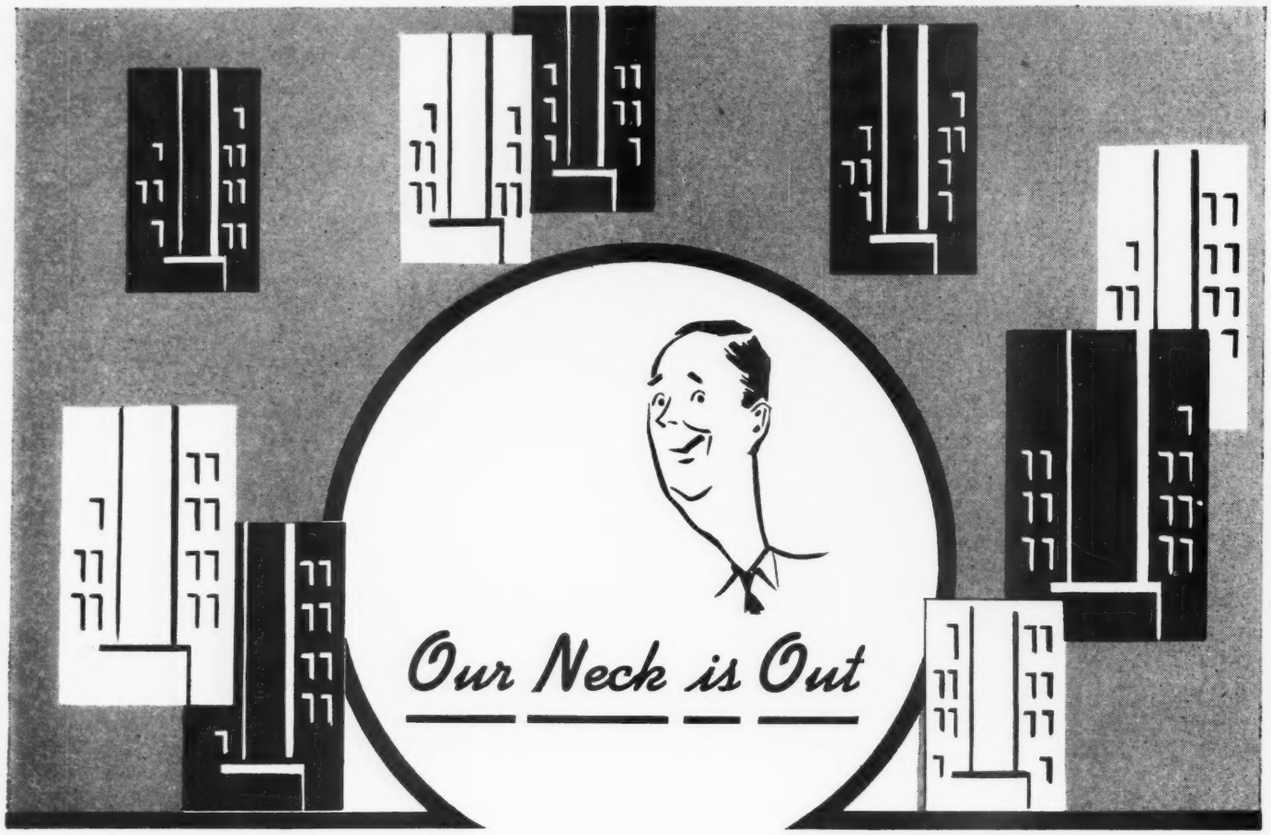
THE DUPLEX HEAVY-DUTY MATRIX ROLLER

It is a self-contained unit, the motor and controller being attached to the main frames. By a special impression control, the pressure of the cylinder can be instantly adjusted with perfect uniformity.

THE DUPLEX PRINTING PRESS COMPANY

BATTLE CREEK, MICHIGAN

PRESS EQUIPMENT FOR EVERY NEWSPAPER



. . IN OVER HALF THE DAILIES!

More than 50% of all daily newspapers use Imperial type metal. Their type metal supplies are so carefully controlled and watched over that Imperial is willing to "stick its neck out" by freely assuming the unconditional responsibility for the metal's performance.

We can assume responsibility, because at regular intervals, a laboratory check is made on the metal condition of each Imperial customer. Since metal performance depends on metal analysis, we know that we are sure of performance if metal balance is kept within close limits.

Get rid of type metal worries and troubles in **your** shop—adopt the Plus Plan and saddle Imperial with the responsibility. Write today for full details.

IMPERIAL TYPE METAL COMPANY

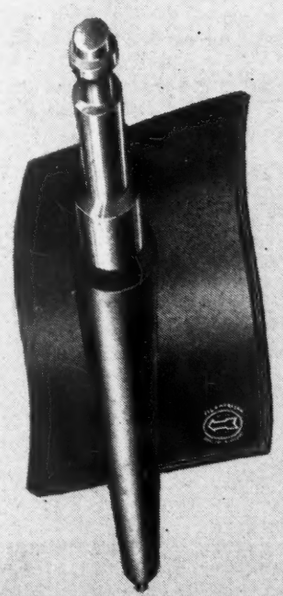
Serving the Graphic Arts Industry Only

Philadelphia 34 **New York 7** **Chicago 50**

Imperial

GREETINGS TO ALL ATTENDING
THE AMERICAN NEWSPAPER PUBLISHERS
CONVENTION

Key to Better Reproductions . . .



MERCURY ROLLERS AND BLANKETS

Open the door to finer presswork with these rollers and lithograph blankets. See for yourself how much more precise your makeready can be when you use these superbly *accurate* accessories. There is never the slightest deviation in their diameters to affect the intensity of ink distribution. Moreover, they *stay* accurate because swelling is prevented, due to the fact that their surface and plies resist absorption of acids and oils contained in ink. They're built by craftsmen — *for* craftsmen!

MERCURY PRODUCTS FOR ALL GRAPHIC ARTS PROCESSES

D. M. Rapport
President

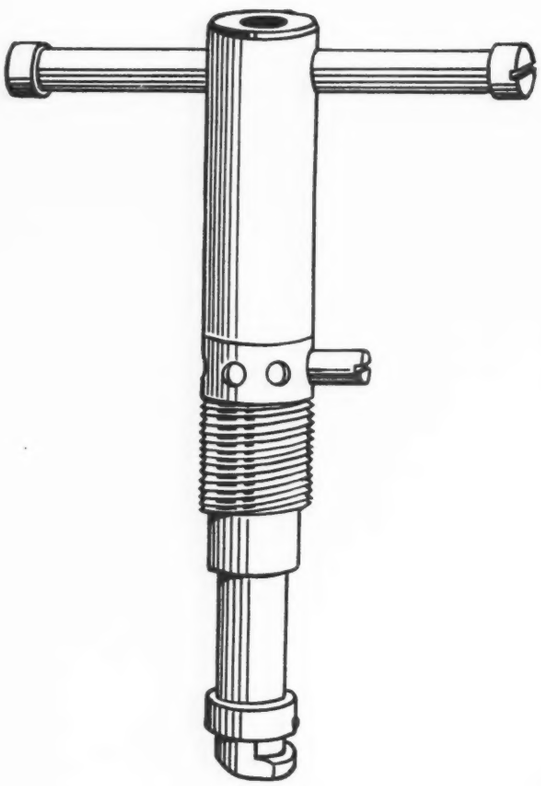
RAPID ROLLER CO.

Federal at 26th
Chicago, Illinois

This latest addition to the

"STAR" IMPROVEMENT PANEL

will be demonstrated at



BOOTHS 35-36

along with the
STAR Close Range THERMOSTAT,
and the many other improved
parts that have helped make
"STAR PARTS" standard
in composing rooms of
many countries.

The ADJUSTABLE VISE LOCKING SCREW

with replaceable tip

There must be a very good reason why ACE BELTS were installed on more Linotypes and Intertypes during April . . . than ever before in our history!

PRECISION
TRADE ★ MARK

LINOTYPE PARTS COMPANY

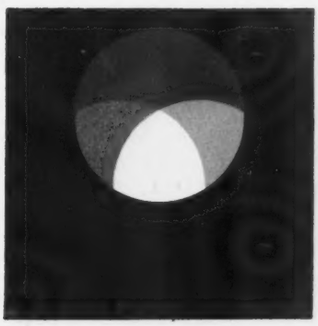
Factory and Main Office
WEATHERLY, PA.

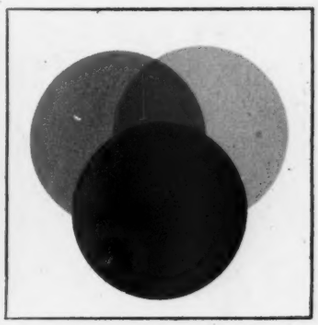
Branch Office
314 West 10th St., Kansas City 6, Mo.

CHICAGO • MINNEAPOLIS • DENVER

A Common Sense Approach to Your Color Printing Problems

THERE is no problem in newspaper publishing today whose solution holds more promise of reward for the individual paper, and an improved competitive position for the newspaper business as a whole, than that of supplying advertisers with color.





It is a mechanical problem, the problem of every mechanical executive of every first-rate paper in every major market, *regardless of whether or not that paper has yet run a page of advertising in color.*

For the report of the Committee on Color Advertising of the Newspaper Advertising Executives Association leaves no doubt that color is here to stay, and that a substantial increase in newspaper advertising revenues waits upon the further development and *more widespread availability* of color.

The problem of printing color at newspaper web press speeds is difficult and complex.

It is, in fact, a multiplicity of problems in art preparation, engraving, stereotyping, press operation, and ink formulation.

We know something of the magnitude, and the sheer cussedness, of many of the problems which confront you.

Particularly those of ink formulation.

For instance, no one knows better than we do, the inadequacy of selling you a can, or a drum, or a tank car of web press color, and stopping there.

We do have standard web press colors.

Matter of fact, we participated in the research and development of the standard process colors adopted by the A.N.P.A., the A.A.A.A., and the A.N.A.

So you can, if you wish, just send for our web press color guide, make your selections from 36 proved, standard colors, and try them yourself.

But we sincerely hope you'll give us an opportunity to be more helpful than that.

We wish you'd call us in, give us a chance to become familiar with your press equipment, talk with us about the difficulties you've encountered or anticipate.

In short, we wish you'd make *your* problem, *our* problem.

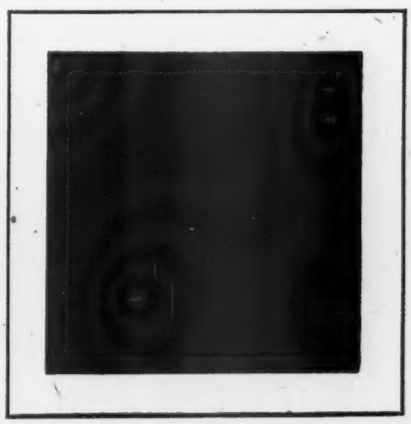
Here, specifically, is what we can contribute to a joint attack on your color problems:

An extensive and *practical* knowledge of newscolor printing acquired through working for years with many newspapers successfully printing color.

Unexcelled laboratory facilities, including:

1. The Product Development Laboratories at each of our factories.

2. The International Printing Ink Research Laboratory equipped with commercial printing presses of every type, *including a high-speed, web-fed, perfecting news press.*



3. The Research Laboratory of the Interchemical Corporation, housed in its own seven-story building, with specialized laboratories devoted to the study of pigments, vehicles, color, and fundamental problems affecting printing processes.

These laboratories are equipped, in part, with a Rotational Viscometer of our own manufacture, an RCA Electron Microscope with a resolving power 50 times that of the best light microscope, a Bausch & Lomb Spectrograph, and a Hardy Recording Spectrophotometer — basic instrument of color analysis.

There is still another asset which we can bring to a joint effort to solve your color printing problems.

Imaginative thinking . . . the kind which met the demand for higher-speed web press printing of national magazines, not by effecting limited refinements in conventional inks, but by developing the entirely new heat-set printing process and its volatile solvent ink, *Vaporin**.

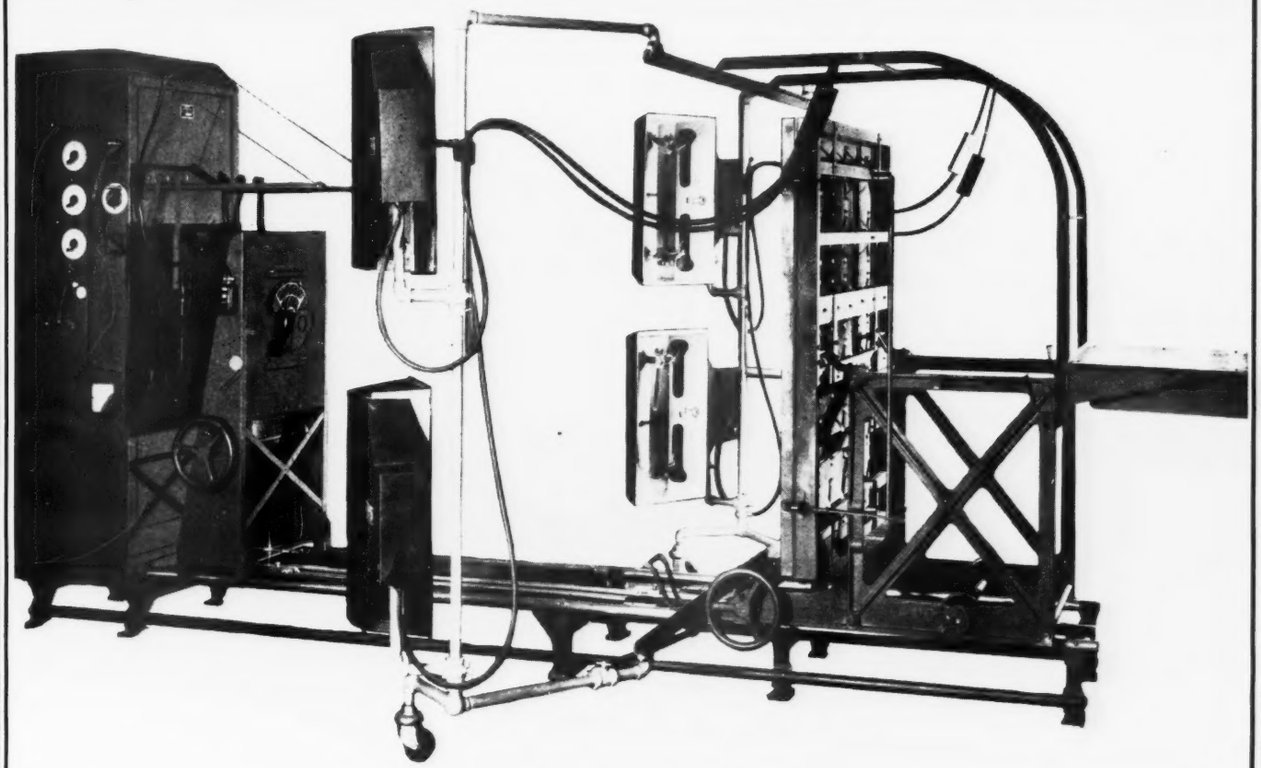
The Vaporin process *sets the ink in a split-second*, leaving it bright, sharply printed, and firmly bound to the fastest traveling web.

Continuing research on Vaporin indicates its successful adaptation to newspaper color printing in the near future.

Doesn't the utilization of these considerable resources seem like a common sense approach to your color printing problems?

International Printing Ink, Division of Interchemical Corporation, 350 Fifth Avenue, New York 1, N. Y. Branches and service stations in 29 principal cities.

*Reg. U. S. Pat. Off.



The Chemco Roll Film Camera for Offset Lithography

The Ultimate in High Speed Quality Reproduction

The above illustration shows the Chemco Offset Type Roll Film Camera with 46″ x 54″ copy Board, — L 125 DDC Gelb Lamps, Vacuum film board, Scale focusing, Double disappearing screen mechanism and with a film magazine holding three rolls of film of different widths, or both film and negative paper if it is so desired.

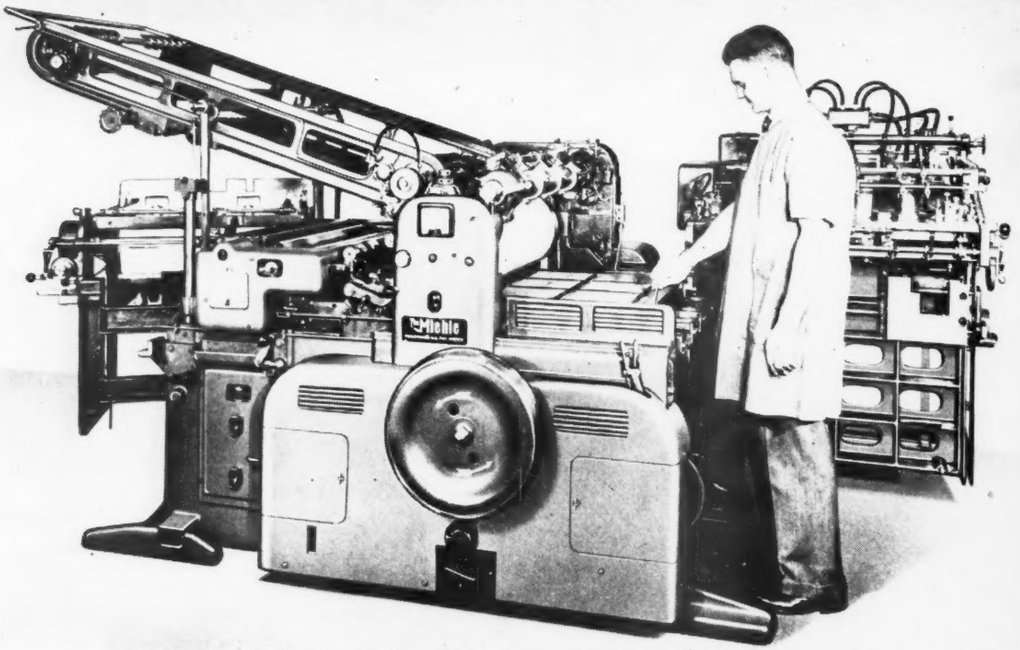
This is a production type camera, capable of the finest work and at a speed which puts it in a class by itself. It holds two different screens at the same time, either of which are instantly available, or both may be thrown out of position for line work.

Consult nearest Chemco Branch for the application of this camera to your work

CHEMCO

PHOTOPRODUCTS CO., INC.
230 W. 41 ST., NEW YORK 18, N. Y.
38 W. KINZIE ST., CHICAGO 10, ILL.
18 TREMONT ST., BOSTON 8, MASS.
408 CAMP ST., NEW ORLEANS 12, LA.
99 CONE STREET, ATLANTA 3, GA.
715A N. ERVAY ST., DALLAS 1, TEX.
Works: Glen Cove, New York

Look to the years ahead . . .



ANALYZE YOUR PRESS NEEDS *now*

Take time now to analyze your press needs—for today, and for the years ahead . . . Check up on the jobs you run—and the additional jobs you could handle profitably with modern Miehle High Production equipment.

In any plant where there is work for a 22" x 28" press, the Miehle 29 has a place. The high speed, low-cost production of this new press brings additional profit possibilities through more jobs—more sheets per day—of fine printing.

Write today for full information on the outstanding performance of the Miehle 29 Letterpress.

CONDENSED SPECIFICATIONS
Miehle 29

- **Speed Range** 2500 to 4500 I. P. H.
- **Sheet Size**
  - Minimum 8½ x 11
  - Maximum 22 x 28
- **Printing Surface**
  - Locked in Chase 20¼ x 26
  - Locked in Bed 20¼ x 27
- **Capacity of Feeder** 34" pile
- **Capacity of Delivery** 34" pile
- **Approximate Wt.** 10,260 lbs. (net, including electrical equipment)

MOTORED BY KIMBLE

THE MIEHLE 29 LETTERPRESS
product of 29 years of development

MIEHLE PRINTING PRESS & MFG. CO.
2011 Hastings Street (14th & Damen) Chicago 8, Illinois

OPEN DISCUSSION

brings good things to the top

WHEN every man has a crack at the subject, fact and wisdom are likely to prevail—whether in the realm of ideas, of equipment or materials . . . Certified applauds such discussion, which so often has confirmed its friends in their preferences and has planted the seeds of new friendships, new discovery of quicker, cooler operation and more uniform excellence of result.

For dependable stereotyping rely on Certified Dry Mats

CERTIFIED DRY MAT CORPORATION
9 Rockefeller Plaza, Dept. M, New York 20, N. Y.

Certified
DRY MATS

NEW

Fisher
(MONARCH)

REMELTER

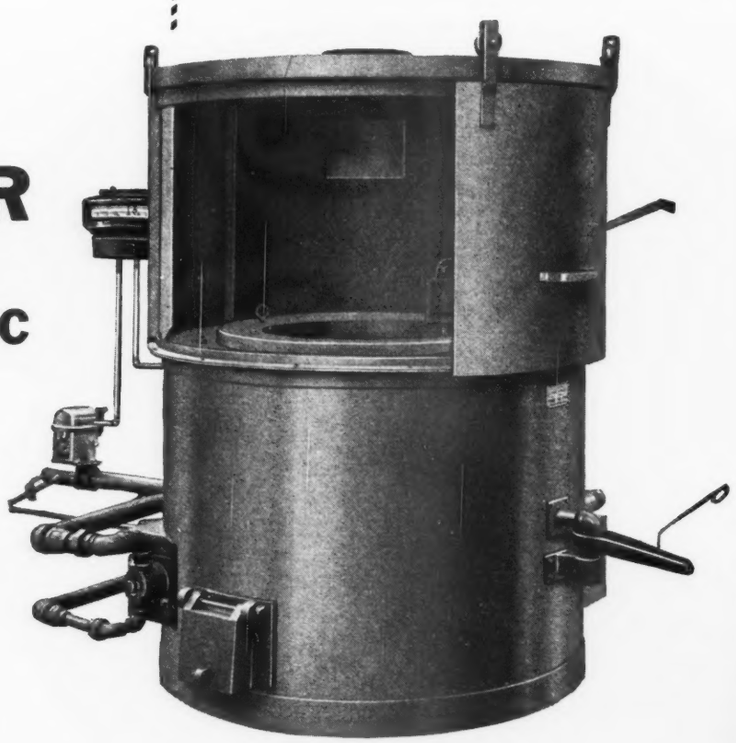
For Typemetal

GAS · OIL · ELECTRIC

Capacity

1000 to 10,000 LBS.

Greetings to all attending the Mechanical Conference



Dependable Rapid Melting

To meet the demand for a truly new type-metal remelt furnace, Fisher proudly offers this worthy successor to the pre-war Monarch line. Although completely new, this furnace is built around the time-proven principles featured by **both** FISHER and MONARCH for many years.

What You Get When You Buy **FISHER**

Fisher Remelters have a six-inch-thick lining to prevent heat loss... and an efficient ventilating hood that meets all fume-removal requirements. To assure fast melting and accurate temperature control, only highest quality gas or oil burners are used. Burners are controlled by a millivoltmeter pyrometer which provides unexcelled temperature control and far surpasses conventional types of thermostats ordinarily used. Automatic control turns burners entirely off and on. Safety pilot light—which can be ignited with a match—is provided for the main burners. For rapid heating and more efficient combustion, a small centrifugal blower is used. This is the heart of the combustion system often omitted on remelters costing more! Fisher's sturdy iron pot is simplicity itself. Hemispherical in shape, it is easy to clean—contains no chambers or mufflers to become clogged. Self-closing pouring valve is located inside pot for safety.

A too-small or antiquated furnace can cost you money. Reduce your metal loss and labor costs by installing an up-to-the-minute Fisher—now! Shipments can be made promptly. Write today for literature and quotation.

Now . . . a complete line of melting furnaces—gas, oil, electric

Fisher Furnaces

A DIVISION OF LINDBERG ENGINEERING CO.

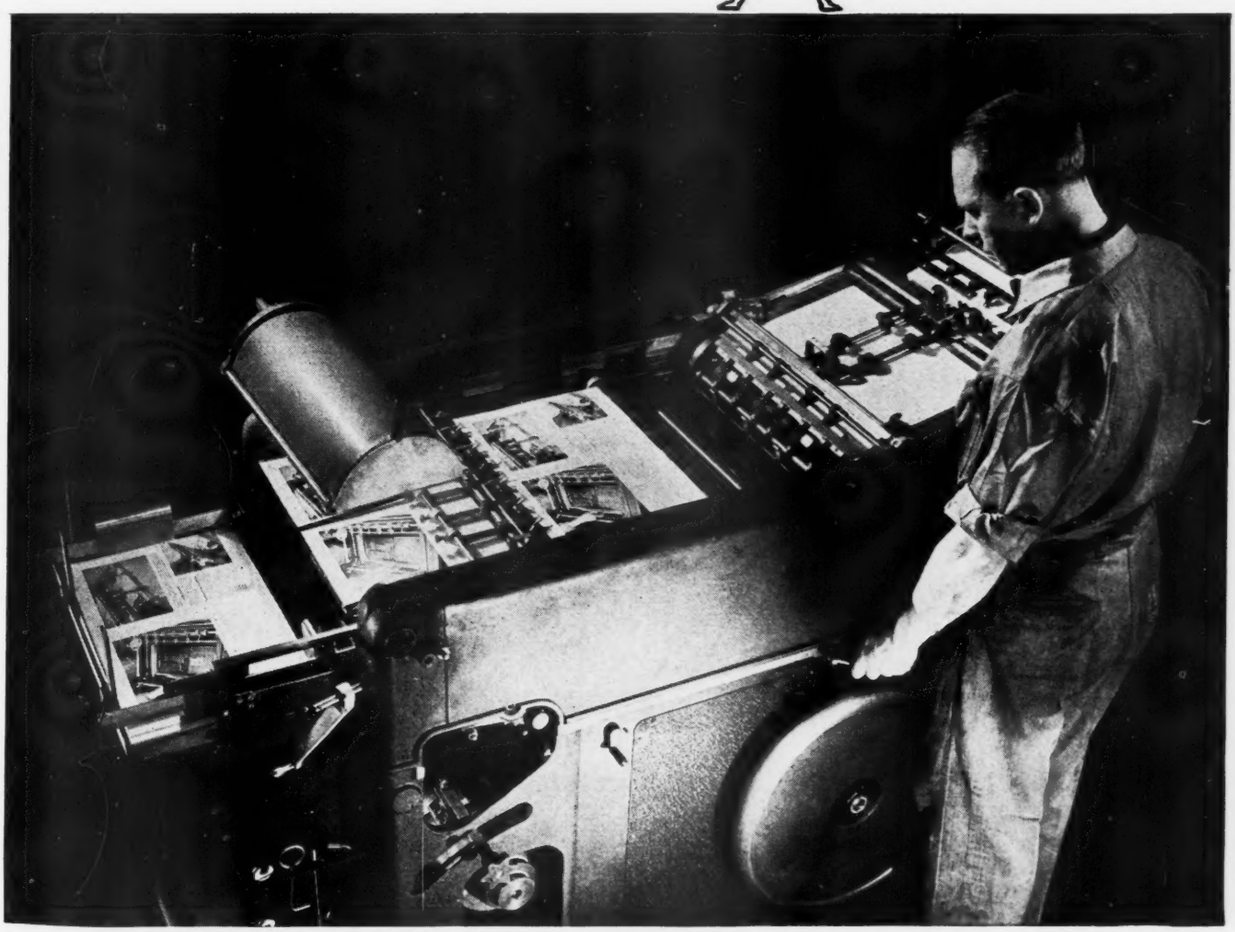
2468 WEST HUBBARD STREET • CHICAGO 12, ILLINOIS

Onion-skin without tears

THERE'S no grief to running onion-skin or tissue on the new ATF Little Giant. Sheets move through smoothly, without wrinkles or tears. The new caliper prevents "doubles" and most jobs run at 3500 an hour—all day long if you wish. Fine rule, hair-line register, or multicolor work is taken in its stride, without need to alter tension on the cylinder grippers. Actual shop experience proves that the new 12x18 ATF Little Giant produces cylinder press quality at less than automatic platen press printing cost . . . running any kind of stock from thinnest tissue to 4-ply board, or even gummed paper, at speeds up to 4000 impressions per hour. Ask your ATF Salesman for complete details and sample sheets from straight commercial runs made under normal shop conditions.

THE NEW ATF LITTLE GIANT

Made by the makers of the famous KELLY presses



American Type Founders ATF 200 Elmora Avenue, Elizabeth B, New Jersey

NEW YORK • CHICAGO • BOSTON • ST. LOUIS

CHARLES ENEU Johnson AND COMPANY

GOOD INKS SINCE 1804

10th and Lombard Streets, Philadelphia, Pa.

• CLEVELAND • DETROIT • BALTIMORE • KANSAS CITY • PITTSBURGH • ATLANTA • DALLAS

Johnson Inks are **GOOD** *inks*

...they enable you to produce

excellent printing at a

saving of time and money

period

THE CALIFORNIA INK COMPANY, INC.

Canadian Representative SEARS LIMITED, TORONTO

World's Largest Selection

OF PRESS BLANKETS

More Than 24 Combinations of Type and Gauge

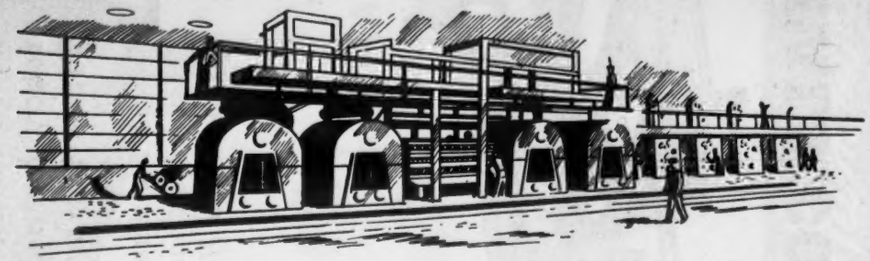
STYLE	THICKNESS							
	.030"-.032"	.055"-.057"	.060"-.062"	.070"-.072"	.076"-.078"	.080"-.082"	.090"-.092"	.025"-.027"
#70 Felt (Top)						X	X	
#67 Non Felt (Top)			X			X	X	
#79 E. D. (Top)	X							X
#77 Draw Sheet			X	X	X	X	X	
#76 Cork (Underpacking)			X	X		X		
#75 Cork (Underpacking)						X		
#62 Single Face (Bottom)		X	X	X				
#63 (Foundation)		X	X	X		X	X	

Other Thicknesses on Special Orders.

No other manufacturer in the world offers such a wide variety of impression cylinder packings as the great improved VULCAN line. There is a special VULCAN combination engineered for every plate, mechanical, speed and print requirement — from the oldest decker type to the newest high speed press with solid cylinder and anti-friction bearings. VULCAN packings meet every need for black-and-white and color and for faithful reproduction of halftones, solids and small-type areas.

The entire line of VULCAN blankets and packings embodies the advanced scientific and technical principles developed by VULCAN research.

VULCAN, the originator of the famous No. 67 non-felt press blanket, MAKES every blanket in this complete line—and sells direct to the user. Let us prescribe the combination best suited to your individual needs. For higher print standards and genuine economy, order VULCAN blankets direct from the maker.



Immediate Delivery!

VULCAN PROOFING COMPANY

FIRST AVENUE & 58th STREET • BROOKLYN 20, NEW YORK

Pacific Coast Representative
THE CALIFORNIA INK COMPANY, INC.

Canadian Representative
SEARS LIMITED, TORONTO

You have heard about the Big Chief and Little Chief Remelter; the Twintype water-cooled and roll over air-cooled molds that cast the double-ear slip-off ingot; the Jordan (continuous chain) Metal Feeder—a far advance over ancient two-chain feeders—and other United American developments that aid the printing industry. And now let us introduce the

DUMPERIN

You roll the truck loaded with as much as 500 pounds of slugs to the Big Chief Remelter, press a button, the truck moves up and opens the door (no help please), turns over and the slugs GO DOWN the hatch. You press another button and the truck backs down as the door closes ready for another load. Time thirty seconds.

For further details write us, if possible visit our headquarters at the Palmer House, Chicago.

A.N.P.A. CONVENTION
June 9th to June 11th

UNITED AMERICAN METALS CORP'N

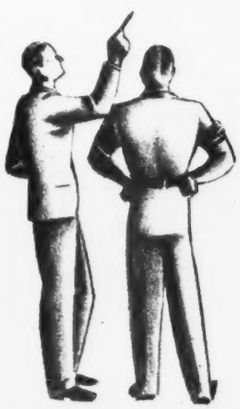
AND AFFILIATED CORPORATIONS

204 Diamond St., Brooklyn 22, N. Y. 2252 W. Hubbard St., Chicago 12, Ill. 4105 Curtis Ave, Baltimore 26, Md.
789 Bryant St., San Francisco 7, Calif. 2444 E. 25th St., Los Angeles 11, Calif.

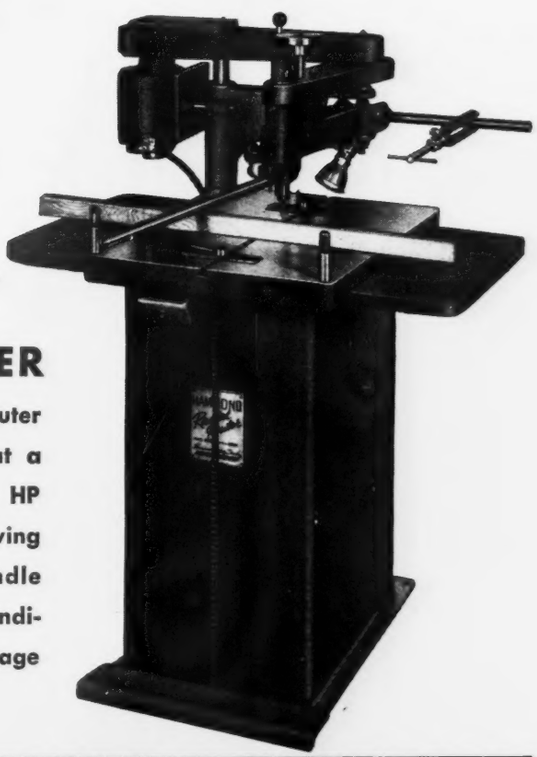
All eyes on HAMMOND

Hammond EASYKASTERS

Hammond Easykasters are fast, efficient, economical to operate, save up to 50% casting time. Made in 8 col. x Full page, 6 col. x 24 inch and 5 col. x 20 inch sizes. Available with Automatic Temperature Control.



Hammond RADIAL ROUTER



The NEW Hammond Radial Router is a good husky machine at a medium price. Features ½ HP motor with belted drive giving constant 12,000 RPM spindle speed under all routing conditions. Handles up to full page plates.

Hammond Machinery Builders INC.

1604 DOUGLAS AVENUE • KALAMAZOO 54, MICHIGAN

They've got Ideals!

Jobs out on time with fewer delays

If you want more hours free from care—equip your plant with Ideal rollers. Besides saving time and money, Ideal rollers help you make more money, too, by increasing production in your plant, insuring top returns from your equipment and satisfying your craftmen's pride in their work.

Use SYNTHOX rotary and letterpress rollers, especially made for moisture set and linseed base inks. Used by largest publishing houses as well as small shops. Special synthetic formulas for aniline work.

Use LITHOCRAFT (Synthetic) or MASTERLITH (Vulcanized Oil) rollers for finest lithography and excellent photo-lith work.

LET IDEALS CARRY YOUR INKS!

IDEAL ROLLER & MANUFACTURING CO.

Chicago 8, Illinois ☆ ☆ ☆ **Long Island City 1, N.Y.**

The fact that it doesn't happen everywhere explodes the notion that "type metal is just type metal."

You don't say, "A necktie is just a necktie," when you pick a "lulu" from Aunt Mary off the tree at Christmas!

Type metal is a creation of science and service, of laboratory and maintenance, of research and far-sighted policy.

The best type metal, therefore, is the product of the biggest resources and the most richly implemented research, and that describes the FEDERATED organization.

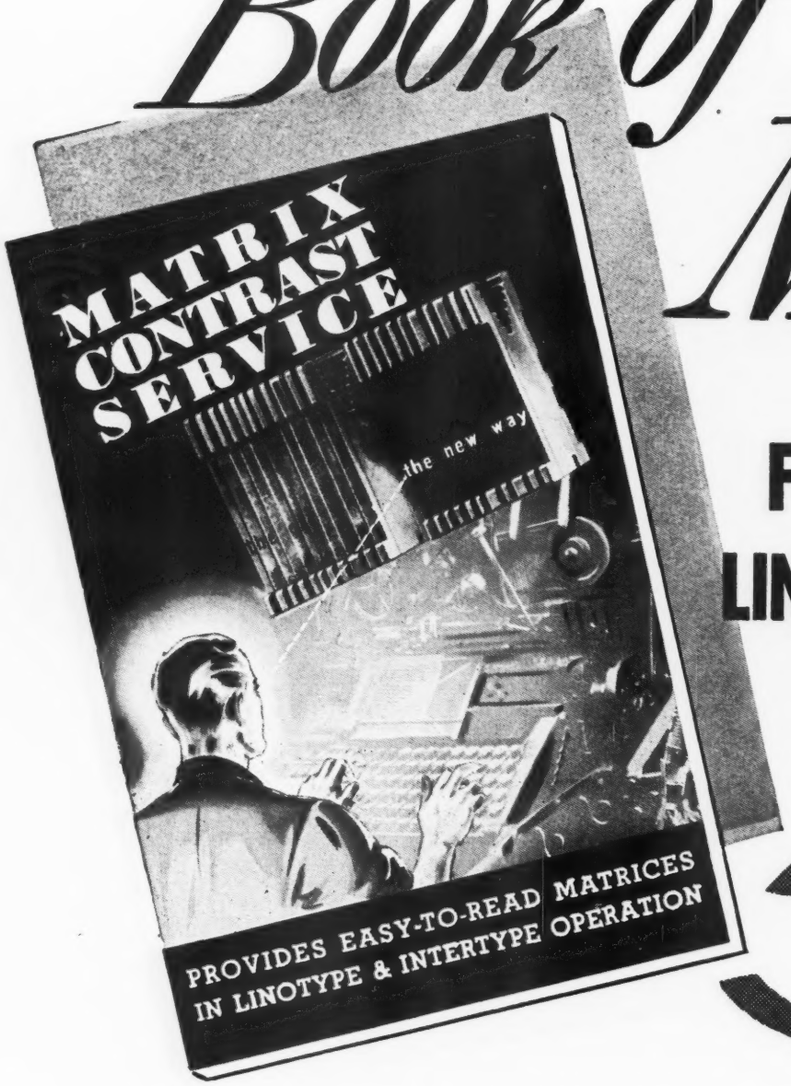
FEDERATED Process type metal doesn't let you down at those crucial moments when the head pressman is standing by the voice-tube with his mouth all shaped to roar. *Federated Metals Division,*
American Smelting and Refining Company,
120 Broadway, New York 5, New York.

Federated METALS DIVISION
AMERICAN SMELTING AND REFINING COMPANY

JMLCO F-61T

Federated first in the non ferrous field FMD

Book of the Month



FOR USERS OF LINE COMPOSING MACHINES!

WRITE FOR YOUR COPY today

Send for your free copy of this 20-page, profusely illustrated booklet which gives complete, up-to-the-minute information on the many advantages of Matrix Contrast Service.

It discusses the benefits now available through the optional use of Matrix Contrast Colors. It explains how distinctive colors on the reference marks of different fonts help to eliminate wrong font errors and provide ease and certainty in the selection of "pi" matrices.

It contains audited figures from plant surveys which prove that Matrix Contrast Service prevents fully one-third of all errors in original machine composition. It reviews the findings of Dr. Matthew Luckiesh, Director of the General Electric Company's Lighting Research Laboratory, whose tests show that Black & White processed matrices have a visibility factor equivalent to 9½-point type as compared to 3-point type for used non-processed reference marks.

Whether printer, publisher or compositor, you owe it to yourself to be fully informed on the latest developments in line composing machine operation. Write for your copy of this new booklet.

Matrix Contrast Service

MATRIX CONTRAST CORPORATION, Empire State Building, New York 1, N. Y.—326 W. Madison Street, Chicago 6, Ill.—1105 Trenton Street, Los Angeles 15, Calif.—Sole licensees of the Percy L. Hill Matrix Contrast Patent No. 1,796,023, other patent pending. European Agents: Funditor, Ltd., 3 Woodbridge Street, Clerkenwell Green, London, E. C. 1.

ANPA Mechanical Conference Program

A VARIED and interesting program has been prepared for the ANPA Mechanical Conference. The conference is being held at Palmer House, Chicago, Monday through Wednesday, June 9 to 11 inclusive.

Dominant topics are Research, Plant Planning and continued attention to Mail Room Mechanization. A new note has been introduced this year. It is that of Guarding Against Fire. Rex E. Hieronymus of Aldis & Co., Chicago, will address mechanical and production executives upon fire prevention.

Newspaper executives will have the usual opportunity to discuss some of their experience problems. This is indicated by the topics assigned to each session.

The tentative program, corrected up to May 29, is as follows:

MONDAY, JUNE 9, 10 A.M.

Chairmen:
J. L. Stackhouse, Easton (Pa.) *Express*
R. E. Lent, Jersey City (N.J.) *Jersey Journal*

Address of Welcome, A Chicago Newspaper Publisher

Address, David W. Howe, President, American Newspaper Publishers Assoc.

The ANPA Research Program, William Baumrucker, Jr., Chairman, Research Committee

What Research has done for the Lithographer, W. E. Griswold, Executive Director, Lithographic Technical Foundation

Plant Layout, Robert I. Miller, Manager, Standardization Div., Curtis Pub. Co.

MONDAY, JUNE 9, 2 P.M.

Chairmen:
J. J. Shea, Hearst Newspapers
Wm. B. Pape, Waterbury (Conn.) *Republican & American*

Building Planning Service of the National Association of Building Owners and Managers
George R. Bailey, Albert H. Wetten & Co., Chicago
B. H. Ridder, Jr., General Manager, Duluth (Minn.) *Herald & News-Tribune*

Vibration Dampening and Noise Elimination, Dr. L. Marick, Structural Rubber Engineer, U. S. Rubber Co.

Guarding Against Fire, Rex E. Hieronymus, Aldis & Co., Chicago

MONDAY, JUNE 9, 8 P.M.

Chairmen:
T. A. Corcoran, Louisville (Ky.) *Courier-Journal & Times*
Joe Menard, Des Moines (Ia.) *Register & Tribune*

Grout Counter Actuator, K. M. Grout, Grout Mfg. Co., Wakefield, Mass.

New Mailroom Installation at Milwaukee Journal (Film), H. M. Jampol, The Jampol Co., New York

New Wire Tying Machine, Adolph Larsen, Gerrard Steel Strapping Co., Chicago

TUESDAY, JUNE 10, 9 A.M.

Chairmen:
B. F. Garrity, Gannett Newspapers, Rochester, N. Y.
E. H. Evers, St. Louis (Mo.) *Globe-Democrat*
R. S. Stratton, St. Petersburg (Fla.) *Times*

Teletypesetter, Frank O. Foster, Teletypesetter Corp.

Mechanical Feeder for Stereotype Pots, Charles M. Kirk, Detroit *News*

Topics:
- Scheduling ad copy.
- Ad production methods.
- What is new in composing room operation?
- What is the best method of setting stock tables?
- Is there anything new in mat driers?
- Does anyone wash press plates before returning them to the pot?
- What is the best height of chase for direct pressure molding?
- What is the best type of mat for direct pressure molding?
- Does it help to use zinc stearate, or any other solution, before placing mats in the Sta-Hi?

TUESDAY, JUNE 10, 2 P.M.

Chairmen:
F. W. Schaub, Decatur (Ill.) *Herald & Review*
C. H. Ruth, Washington (D.C.) *Star*
J. L. Blake, Scripps-Howard Newspapers, New York, N. Y.

Press Drives
- General Electric Co., W. L. Wright
- Cline Electric Mfg. Co.
- Cutler-Hammer, Inc., C. P. Feldhausen

What's New in News Ink? W. G. Forster, Sun Chemical Corp.

Driers and Inks for a Newspaper Color Press, B. Offen, B. Offen & Co., Chicago

Newsprint Quality, Gerard Larocque, New York *Daily News*

Topics:
- Experience with glass bead drawsheets.
- Hydraulic press cylinder brakes.
- Glue for pressroom pasters.
- Newsprint salvage.
- How efficient are flying pasters? Is the investment warranted?

WEDNESDAY, JUNE 11, 9 A.M.

Chairmen:
M. A. Hagan, Philadelphia (Pa.) *Inquirer*
R. R. Cranmer, Williamsport (Pa.) *Grit*
William Baumrucker, Jr., New York (N.Y.) *News*

Film—The Use of Ektachrome Film, Eastman Kodak Co.

Layout and Equipment for a Newspaper Color Studio, J. W. Lemen, Eastman Kodak Co.

Making Four-color Newspaper Printing Plates, R. W. Gardner, Eastman Kodak Co.

Color Equipment for Newspapers, Sam B. Anson, Jr., Chemco Photoproducts Co.

New Engravers' Cameras, K. R. Burchard, American Type Founders

Fairchild Engraving Machine, D. B. Hollister, Fairchild Camera & Instrument Co.

Topics:
- Film vs. wet plate.
- Darkroom camera vs. gallery camera.
- Experience with Eastman contact screen.
- Eastman stripfilm.
- Are coated lenses helpful to the engraver?

WEDNESDAY, JUNE 11, 2 P.M.

Chairmen:
W. L. Fanning, Yonkers (N.Y.) *Herald Statesman*
A. H. Burns, New York *Herald Tribune*
J. W. Park, Chicago *Tribune*

Four-color Printing, J. J. Eberle, Milwaukee (Wis.) *Journal*

The Ayer Annual Typographic Contest, V. Winfield Challenger, Director of Printing, N. W. Ayer & Son, Philadelphia.

ANPA-AAAA Joint Committee on Newspaper Printing, Stanley Myers, Philadelphia (Pa.) *Bulletin*, George B. Dearnley, McCann-Erickson, Inc., New York

Film—*The "Webtip" Device*, R. W. Tranter, Boston *Herald-Traveler*

Production of a Rotogravure Comic Section, C. J. Hentschell, St. Louis (Mo.) *Post-Dispatch*

Topics:
- What newspapers have a system for inspecting, recording, and storing agency printing material?
- Standardizing address labels on agency material.
- Need for closer cooperation between newspapers and agencies.

ANPA Mechanical Committee

LIKE any other similar group of men, the personnel of the ANPA Mechanical Committee is changed partially from time to time. This year the committee has been increased to eighteen members. The complexion of the Committee too, has been changed with appointment of the new members. As it now stands, there is a majority of business manager talent in its membership.

One reason for the present change in personnel may be that the Committee is now embarking upon a program of scientific research for which the newspaper printing industry has long been in need. At this year's Chicago Conference it is expected that the Committee will make a substantial report as to what has been accomplished to date and what is expected to be accomplished for the coming year at least.

The general attitude of the industry and the Committee members seems to have been summed up by one member when he stated: "My hope is that we can really do something with the ANPA mechanical research project. I am sure there is a great willingness on the part of the industry to go in for engineering development and with this willingness I know we can get somewhere."

The personnel of the 1947 Committee is shown in portrait form with the exception of three members whose photographs *Printing Equipment Engineer* was unable to secure. We print old and new members, portraits so that all production and mechanical executives may know who they are. In some cases, these pictures will serve as an introduction to one or more Committee members with whom you might wish to discuss how best they can serve you. Printed with each portrait of the new members is a short biographical sketch.

J. L. Stackhouse

J. L. STACKHOUSE, Chairman of the ANPA Mechanical Committee, is president of the Easton Publishing Co., Easton, Pa. Its principal product is the daily Easton *Express*. Perhaps one reason why Mr. Stackhouse finds himself head of the Mechanical Committee is that when asked what particular part of the newspaper publishing business he likes best, he replied: "I like all of it."

He has been with the Easton Pub. Co. for the past 29 years.

His activities in business affairs have been numerous. He has been associated with the American Pipe & Construction Co., Philadelphia; Amies Road Co., Philadelphia and Easton, and with Lehigh Coal & Navigation Co., Philadelphia. His extra-curricular endeavors have been as follows: Member of Daily Newspaper Code Authority; President of the PNPA; President, ANPA Board of Directors for past seven years; now Secretary of the ANPA, and Chairman of the ANPA Mechanical Committee.

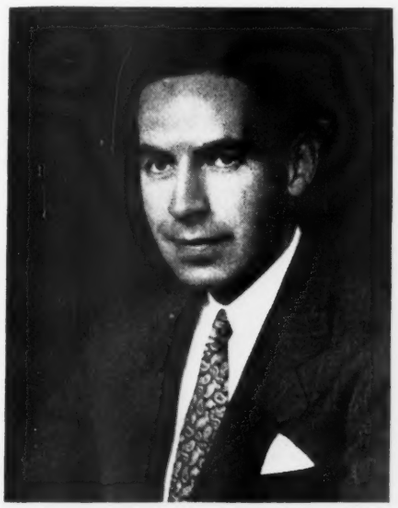
His schooling consisted of attendance at Randall School of Business, Philadelphia; then for a few months at Wharton School of Accounts and Finance University of Pennsylvania; and Churchman Business College in Easton, Pa. He is a member of Sigma Delta Chi, Pennsylvania State College Chapter.

His hobby is flower and vegetable gardening; likes to tickle the soil and watch things grow.

J. L. STACKHOUSE, President Easton (Pa.) *Express*, Chairman of the ANPA Mechanical Committee.

Wm. Baumrucker, jr.

NEW member of the ANPA Mechanical Committee, Wm. Baumrucker, jr., is Administrative Assistant to Business Manager of the New York *News*. He has been associated with the *News* for 16 years. For two and a half years (1940 to 1943) he was Business Manager of the newspaper *PM*, in New York. He holds the degree of B.S. from Massachusetts Institute of Technology. His entire experience in newspaper publishing has been with the mechanical departments and the business office.



The *News* Studio, L. Toloff

WILLIAM BAUMRUCKER, Jr., Adm. Asst. to Bus. Mgr., New York (N. Y.) *News*.

A. H. BURNS, Mechanical Superintendent New York *Herald Tribune* (former Chairman, ANPA Mechanical Committee).

T. A. CORCORAN, Purchasing Agent Louisville (Ky.) *Courier-Journal* and *Times*.

and Clinton Counties, advanced to Assistant Supervisor of Operations in a nine county district. He was Experimental Engineer on Engine and Propeller Development at Avco Corporation.

His work at *Grit* has been a constant effort toward better printing through engraving and stereotype plate improvements, blanket experimentation and a continuing process of development of a better news ink.

He has been a member of the PNPA Mechanical Committee since 1944. He is a member of the executive committee and past President of the West Branch Valley Supervisors' Club.

RALPH R. CRANMER, Business Manager, Williamsport (Pa.) *Grit*.

JOHN L. BLAKE, Scripps-Howard Newspapers, New York.

Ralph R. Cranmer

WHO hasn't heard of Pennsylvania's *Grit*? This weekly newspaper, now in its 65th year, has a national circulation of over 650,000 copies. It's purpose is to be "Small Town America's Greatest Family Newspaper." All of which leads up to that to which we want to mention: Ralph R. Cranmer, new member of the ANPA Mechanical Committee, is Business Manager of Grit Publishing Co. in Williamsport, Pa.

Cranmer graduated from Penn State College with the degree of B.S. in Mechanical Engineering. Since then, with certain brief interruptions, he has been Assistant Mechanical Superintendent (1939), Mechanical Superintendent (1942) and in 1946 was made Business Manager of *Grit*. Previously, his professional activities were: Field Engineer, CWA; Resident Engineer, Lycoming

EDWIN H. EVERS, Production Manager St. Louis (Mo.) *Globe-Democrat*.

W. L. FANNING, General Manager Yonkers (N. Y.) *Herald Statesman* (Former member of ANPA Mechanical Committee now serving second term).

Bernard F. Garrity

TALL and mostly genial, Bernard F. Garrity now is a member of the ANPA Mechanical Committee. He succeeds his mentor, Jack Burke, who was a member of the Committee for a long time. Garrity is Personnel Director of the Rochester (N. Y.) *Democrat & Chronicle* and the *Times-Union*. Garrity is one of those fellows who work quietly but steadily. This isn't to say he's always tranquil. Upon occasion, those Irish eyes can express themselves forcefully. Garrity avers he likes every branch of the business—has the greatest respect in the world for each component part of newspaper publishing. Two years ago he was Production Manager of the Hartford (Conn.) *Times* and was brought to Rochester to fill the newly created position which he now holds.

Garrity likes his fellow executives in the business. He is a past president of the lusty New England Mechanical Conference.

B. F. GARRITY, Personnel Director, Gannett Newspapers, Rochester, N. Y.

MAURICE A. HAGAN, Photo-engraving Superintendent Philadelphia *Inquirer*.

R. E. LENT, Business Manager Jersey City (N. J.) *Jersey Journal*.

William B. Pape

ONE of the new members of the ANPA Mechanical Committee is William B. Pape. He has been associated with the Waterbury (Conn.) *Republican* and *American* for 20 years and is now Assistant Publisher. With this firm he has been respectively reporter, assistant business manager and business manager.

Mr. Pape is a graduate of the U. S. Naval Academy (1922). He is vice president of the *Republican* and *American* subsidiary, The Eastern Color Printing Co., in Waterbury.

His interests in the newspaper game are diversified. He likes the business, editorial and mechanical sides.

JOHN W. PARK, Production Manager, Chicago *Tribune* (Former Chairman, ANPA Mechanical Committee).

F. W. Schaub

PREVIOUSLY, F. W. Schaub has served on the ANPA Mechanical Committee. He is Treasurer and Business Manager of Decatur Newspapers, Inc., Decatur, Ill. He has been with the company for 25 years. He is a graduate of the University of Illinois with the degree of A. B. As is the case with most other executives, improvement of the printed appearance of newspapers has long been a challenge to him.

FRED W. SCHAUB, Treas.-Bus. Mgr., Decatur (Ill.) *Herald* and *Review* (Former member ANPA Mechanical Committee, now serving second term).

CHARLES H. RUTH, Production Manager Washington (D. C.) *Star*.

J. J. (Ted) **SHEA**, General Mechanical Superintendent Hearst Newspapers, New York.

Russell S. Stratton

ANOTHER of the several new members of the ANPA Mechanical Committee is Russell S. Stratton. His job is that of Assistant General Manager of the St. Petersburg (Fla.) *Times*. Minus the war years, Mr. Stratton has been associated with Florida newspaper life for 23 years. He is a graduate of Bluffton (O.) college. Being a resident of Florida he fits right in with two of its principal sports, those of fishing and sailing. He will also take you on for a game of badminton—likes the game because it is fast moving. In the newspaper profession he likes best the mechanical end.

RUSSELL S. STRATTON, Asst. Gen. Mgr., St. Petersburg (Fla.) *Times*.

W. E. WINES, Manager ANPA Mechanical Department.

Consider the Specialist

(An Editorial)

TO THE editor's desk come many letters from readers of *Printing Equipment Engineer*. Some of these letters contain requests for information and counsel. Such letters are always welcome. Service to its readers is a major objective of this publication. It is obvious that the better we understand their interests the better will be our ability to serve them. While we are telling our readers that we want them to communicate with us upon any conceivable Graphic Arts subject coming within our editorial objectives, we want to make it plain that our staff does not consist entirely of specialists. We are glad at all times to have our readers write to us. Not being gifted with the ability to answer all questions, we will tell our readers where the answers may be obtained if we cannot supply them ourselves. In this article we wish to discuss the matter of engaging the services of the architectural-engineering specialist when a new plant is to be erected or the existing plant building is to be expanded.

Among the letters which reach us are those which ask for advice and help in connection with plant objectives. If a new plant is contemplated the questions asked include these two: "How shall we proceed?" and "Who can help us in the planning of such a building?". If the program slants toward expansion or modernization, the questions usually refer to safe loading, arrangement, and the old, old question "How can I determine whether to remodel or build new?".

Consistently, *Printing Equipment Engineer* has preached the doctrine of specialization. This is the day of the specialist. In every field of activity—in Science, in Commerce, in Industry, in the Professions—the demand is for the man who is qualified to do a particular job particularly well. The Graphic Arts Industries suggest no exception. They abound in examples of specialization. For any special printing job that can be named there will be found a printer whose skill and facilities are particularly suited to that particular job.

So it is with printing and publishing plant improvements. They present problems which are special and peculiar. In the pages of *Printing Equipment Engineer* have been carried many articles in support of our conviction that anyone who faces the task of constructing a new publishing or printing plant, or of expanding or modernizing an existing one, can ill afford to embark on such a program without the assistance of someone who is familiar with the problems involved and who is experienced in their solution.

Now, in discussing the printing architect-engineer specialist in comparison to the local general architect, we want to make it plain that we have nothing at all against the local general architect as such. He fills an important role in his community. He, however, is not familiar with the peculiar requirements of specialized types of building construction in the planning and erection of which the services of the specialist are required. Church architecture, for example, is a highly specialized profession. So is printing plant architecture, involving as it does a combination of architectural and engineering ability. Printing plants are not erected frequently within the domain of the local general architect. Therefore, how can he qualify as a printing plant architect-engineer?

The local general architect and engineer can make many contributions to the success of a printing plant improvement program. From the angle of local public relations, as well as other considerations, it is often desirable that he be given a part in the program. He should be cast in the role, however, that he can play best. Unless he has had substantial previous

experience in this field, can plan in terms of printing production operations, knows the space allocations needed for the various operations, is aware of the many special engineering requirements—structural, mechanical, electrical, etc., is cognizant of the service demands upon materials, floors, walls, etc., the situation can easily become an example of "the blind leading the blind."

Without qualification, we repeat that in any publishing or printing plant improvement program, the service of the specialist in plant layout is the best investment that can be made, and the best possible insurance against costly mistakes in layout, equipment and construction.

A letter recently received voices recognition of the need for such assistance. From it we quote: "We contemplate the construction of a new building for our newspaper within the next year or two. A local architect has made preliminary drawings of the building, but we feel that it would be wise to have them checked over by someone who understands newspaper operations and plant layout. Is such a service available?".

This plant manager was clearly aware of the need for specialized service in planning his improvements. He wanted assurance that the plant, as planned, would be workable and efficient. The only criticism to which he exposed himself was in having preliminary drawings of the building made *before* having studied and planned production operations with the assistance of the service he was seeking. Even so, his procedure was less open to criticism than that of another manager who similarly sought assistance *after* having had working drawings for his building completed.

In either case, the most effective use of the specialist would have been for the manager to have consulted him at the inception of the program. The specialist would have analyzed present operations, worked with the publisher and his staff in determining growth probabilities, and assisted in translating the requirements in terms of a layout for the new site. Then, but not until then, should the preliminary building drawings have been developed.

In the case of the plant manager discussed above, we became curious as to why he wanted to engage the services of a specialist *after* he had had the local general architect prepare the preliminary drawings. He was frank enough to tell us.

It seems that considerable new equipment was to be installed in the new building.

In the course of discussions concerning equipment with sales representatives of several manufacturers they were shown the plans of the new building as prepared by the local architect. Thinking in terms of the production operations of their own particular equipment, numerous criticisms were made, as well as suggestions for improvement. Some of the criticisms were minor while others were quite serious. Their net result, however, was a feeling of uncertainty as to the soundness of the layout, and a conviction that before the building progressed from paper to concrete, brick, stone, etc., steps should be taken to provide assurance of satisfaction.

Calling in the specialist after the planning has begun, or is well advanced, is not quite parallel to "locking the barn after the horse is stolen", for the "horse" is still there. Such preliminary planning without benefit of the specialist may mean drastic or revolutionary changes in work that has already been done, with probable resistance on the part of those who expended the time and energy to develop it. The alternative, to avoid complete loss of work already done, may be a compromise which could well have been avoided. In any event, it is likely to create a situation in which the whole-hearted cooperation needed for the successful consumation of the program is lacking.

If, on the other hand, the specialist had been called in at the beginning, had worked out the production operation plan with the publisher and his executive staff, and developed a general scheme for the building, the local architect, in all probability, would have accepted it without prejudice and lent his fullest cooperation in developing the building from it. It should be explained here that after the planning has been completed and the working drawings have been finished, the specialist also serves in a supervisory capacity. The local architect and contractors whom he engages proceed with erection of the building or the remodeling plans, as the case may be.

So, to repeat ourselves again, we suggest the employment of specialized service in the planning of any publishing or printing plant improvements. With no less conviction we urge that the investment in this service be given its best opportunities for profitable return by bringing it into the program early enough and giving it scope enough to make it a creative and potent factor.

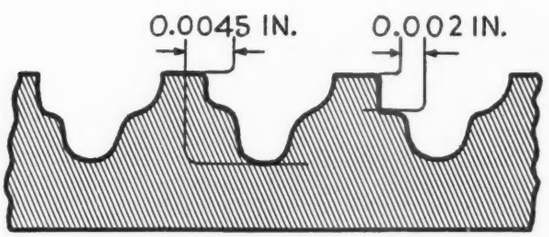
Why The Stereotyper's Hair Turns Gray

SHOULDERED halftone dots in newspaper printing must be fairly prevalent—both original and in electrotypes—if we are to recognize the complaints of stereotypers at various newspaper mechanical conferences. When molding newspaper page forms, the stereotyper is already confronted with a very unmechanical aggravation—the loss of depth in halftones. The greater the shrinkage in the page mat, the greater will be his loss of not only area, but depth as well. In the average case, we will assume that there is a loss of 25% in halftone molding depth by the stereotyper because of the unavoidable and necessary mat shrinkage.

The second problem encountered by the stereotyper arises when he must mold a mat from a shouldered-dot halftone. Because of the shouldered dot as shown in diagrammatic form in the accompanying illustration, he loses anywhere from 25% to 50% depth in the molding operation. Assuming the halftone is 65-line screen, with 0.0045 in. depth in the highlight dots, but with shoulders about 0.002 in. depth from the face, it can be seen that the shoulder (so far as the stereotyper is concerned) becomes the bottom of the interstice, it stopping off the mat from going any deeper in the molding operation.

Without going into the technical reasons for the shouldered dots, it should be apparent that the stereotyper is entitled to an original halftone engraving or electrotype which will enable him to secure maximum molding depth.

When a stereotype plate containing an illustration molded from a shouldered dot halftone reaches the pressroom another thing happens. Press blankets and newsprint being soft in nature, the paper is pushed down somewhat between the non-printing areas in the plate. In this instance, the shoulders in the halftone become part of the printing surface of the plate even though they may be slightly below the actual printing surface. Thus, mat shrinkage, plus shoulders, plus soft packing and soft paper contribute to poor printing.



This enlarged cross-section of a 65-line screen halftone plate is not drawn to scale. It is presented here merely to illustrate the point.

EQUIPMENT & SUPPLIES

Macbeth Transparency Chromocritic

THE problem of color agreement or color interpretation among buyers and users of process color plates for any of the major printing processes may be avoided through the use of a transparency viewer recently announced by Macbeth Arc Lamp Co. Manufacturer states: "Between the user, the advertising agency and the printer many different

people view the color transparency and give their OK or directions for color corrections to be made. But each views the transparency under different light conditions. Consequently, each sees a different result."

The Macbeth Transparency Chromocritic is designed to register and reproduce specified color temperature. It is intended to insure uniformity for photographer, advertiser, advertising agency, and for gravure, lithographic and photoengraving plate makers.

Incorporated in the device are adjustable light sources with which are controlled the all-important color tones. Meter readings of the two adjustable light sources which have given the buyer just the color tones he wants are marked on the edge of the transparency. When the color plates are being color corrected by the artist or the engraver, the transparency is viewed through a similar viewer with the two color source meter readings set as indicated by the buyer on the edge of the transparency. Chromocritics can be placed in advertising art departments and in the platemakers' plants.

Manufacturer states positive ventilation is provided to maintain normal temperature. Masks are available for each size transparency (max. 12 in. by 12 in.). If desired, a light hood can be supplied. Further information will be supplied by addressing your request to *Printing Equipment Engineer*.

Offset Press Booklet

Stuart E. Arnett, Sales Manager, Printing Machinery Div. of the Electric Boat Co., announces that the booklet entitled, *Why the Lithographer Must Consider the E. B. Co. Willard*, is available. The 24 page booklet is 10¾ in. wide by 7 in. high.

The booklet is lithographed on an E. B. Co. Willard Press in color on coated paper. Every feature of the press from feeder to delivery is illustrated. A brief history of the press and its acquisition by the Electric Boat Co. is included. Detailed drawings accompany the explanatory text. Complete specifications are included along with a floor plan and full color illustrations of the press.

Requests for the booklet should be addressed to the Printing Machinery Div., Electric Boat Co., 445 Park Ave., New York 22, N. Y.

Wade Gathering and Boxing Machines

FINISHING operations in the bindery on such items as books, greeting cards, pamphlets and the like, according to Bindery Developers, will be speeded up through the use of two automatic machines that have been developed recently. One machine is called the Wade Gatherer and the other is called the Wade Multiple Pocket Greeting Card Gathering and Boxing Machine. They were developed for finishers and binders by practical bookbinders. Each machine is built to do a specific job.

The first of these, the Wade Gatherer will gather from 2 to 36 signatures automatically, it will gather single sheets of 16 lb. bond or any weight paper up to and including cardboard; it will gather signatures of 4 pages in multiples up to and including 32 pages.

Suckers are used on the Gatherer feeding mechanism to disengage each individual sheet or signature from the bottom of the pile and bend it into position to be seized by rotating feed rollers, which pull it from the pile. The suckers function only to bend the sheet or signature so it will be engaged by the feed rollers. The rotating feed rollers feed each piece between a set of conveyor belts which delivers the piece to its proper place on the gathering track.

No change in suckers is necessary irrespective of whether single sheets or folded signatures are being gathered.

Bindery Developers state a wide range of work can be executed on the Gatherer by reason of flexibility of the design of the machine. One feature provides for reduction in the number of hoppers or operating units necessary to produce books with greater or smaller number of signatures. The hoppers holding the work to be gathered may be adjusted to

Nylon Faucet Washers

A NYLON faucet washer has been developed by Atlantic Plastics, Inc. It is claimed that through the use of nylon the frequency of changing faucet washers has been reduced. Among the virtues claimed for these washers by the producers are resistance to abrasion, resistance to cold flow, freedom from odor and taste, low moisture absorption, good thermal characteristics, low coefficient of friction, and resistance to chemicals and to changes in temperature.

View of Wade Signature Gathering Machine. Will assemble from 2 to 36 signatures automatically; gathers single sheets of 16 lb. bond or any weight paper up to and including cardboard. Size of work ranges from 4 in. by 6 in. to 10 in. by 12 in. This is a front view of the machine. In front of the machine is a conveyor mechanism (not shown) with an automatic takeoff which will stack the assembled books so they can be removed in groups rather than individually. The conveyor automatically jogs gathered signatures. At the top of the machine are shown signatures deposited manually in the hoppers. Floor space required is 90 in. by 44 in. for each 6-hopper unit with 48 in. by 44 in. space for the work takeoff. Machine is 60 in. high. On the 6-pocket machine, 1½ h.p. motor is required to drive pump and machine. The rotating feed rollers at the front (two for each signature) deposit the signatures in order upon the conveyor at the front of the machine.

View of Wade Greeting Card Gathering and Boxing Machine. This is a 25-hopper machine (hoppers at upper left). It is possible to assemble greeting cards with envelopes into boxes having one, two, three or four compartments as desired. At lower front of this view is the delivery end of the box conveyor. At upper right is the feeding end of the conveyor. Boxes for the cards are placed upon the individual trays of the conveyor at the upper right end. To explain the production possibilities of the machine, we will assume that each box is to contain 12 envelopes and 12 cards. In this case, the first three pockets (far end) would remain empty and would be rendered inoperative by closing the suction feeding cups. The next 12 hoppers would each contain envelopes and the last 12 pockets would each contain cards. As each box passes the delivery of each hopper one card or envelope is deposited in the box. Therefore, there would be 12 envelopes and 12 cards in the box when it reaches the delivery end of the conveyor. Operators place the empty boxes upon the feeding end of the conveyor; other operators remove the boxes from the delivery end and place the lids upon the boxes. Hoppers for envelopes and cards are filled manually. Machine is 46 ft. long by 4 ft. wide, by 4 ft. 6 in. high. In addition, an additional conveyor is necessary operating in the same direction as the machine or at right angles to it. The 25-pocket greeting card machine is supplied with 1½ h.p. drive motor and 1 h.p. motor for water-cooled pump.

the required size by a turn of a wheel at one end of the Gatherer. Thus, simultaneously, the size may be changed to fit work 4 in. by 6 in. up to 10 in. by 12 in. in the standard machine. Sizes beyond these limits are accommodated by building machines to desired specifications.

A Reeves pulley drive provides selection of operating speeds. A positive chain drive prevents slippage between conveyor and feeding mechanism.

David P. Wade of Bindery Developers, declares that to keep a six-pocket machine operating at 8000 books per hour on a 32 p. signature, a combination of 25 Dexter Folders will be required.

Wade Multiple Pocket Greeting Card Gathering and Boxing Machine

Operating principles of the Wade Gatherer are utilized in the Wade Greeting Card Gathering and Boxing Machine. The machine makes possible collation and delivery of cards and envelopes to their selected places in the receiving containers. Twenty-five hoppers or pockets make possible the depositing of subjects such as greeting cards with envelopes into boxes or containers having one, two, three or four compartments as desired.

Through an ingenious arrangement of feed belts, each stack of cards held in its respective hopper will be fed into the proper division of the receptacle as it passes below the end of the feed belt.

Using the machine in their own plant (The Apex Bindery, New York), the developers are reported to have turned out 30,000 boxes with 21 cards in each box in a 7 hr. shift. Higher operating speeds are claimed for the machine, but up to this time manual handling of the containers as they leave the conveyor has cut down the speed of the machine.

To give some idea of the potential of the machine, the developers say they have unofficially clocked it at speeds of 20,000 boxes per hour. The average speed necessary to yield production of 30,000 boxes per 7 hr day was about 4800 per hour.

Cards of any design or shape with die-cuts, snow covers, tip-ons or with ornaments may be handled as readily as plain paper. A rubber, non-marking, non-defacing feed belt holds each card as it travels from the hopper to its proper place in the receiving box.

Five groups of hoppers, each group containing five individual hoppers, will give the present machine a 46 ft. run. This setup has been found to be most effective. A similar arrangement or hopper-size control to that employed in the Wade Gatherer permits card sizes handled to vary from 3½ in. by 4½ in. to 7½ in. by 8½ in.

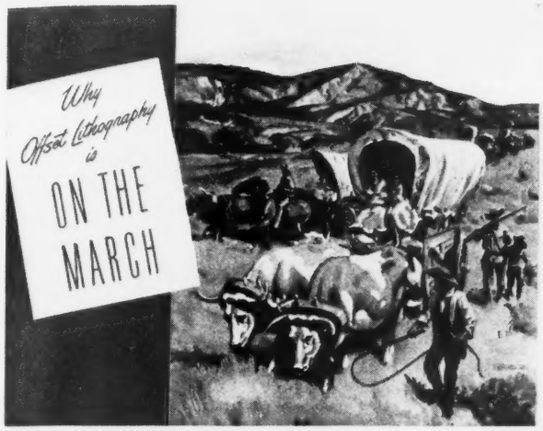
If you would like further information about either the Wade Gatherer and/or the Wade Multiple Pocket Greeting Card Gathering and Boxing machines, address your inquiry to *Printing Equipment Engineer.*

Matrix Contrast Booklet

A 20-PAGE illustrated booklet has been issued by Matrix Contrast Corp. to explain benefits to be obtained through optional use of Matrix Contrast Colors. Also contained in the booklet are audited figures from plant surveys to show that Matrix Contrast Service prevents errors in original machine composition. The findings of Dr. Matthew Luckiesh, Director of the General Electric Co.'s lighting research laboratory, are reviewed. A copy of this booklet may be obtained upon request to *Printing Equipment Engineer.*

Linotype Slugs Serve as Memos

WHEN Frank C. Capucetti, machinist with the Petaluma (Calif.) *Argus-Courier*, discovers a worn or broken part, or finds a shortage of matrices in any magazine channel, he sets a line with the part name or font description and tosses the resultant slug into a conveniently located cigar box, according to *The Linotype News*. Then when he is about to make out an order for supplies, or when the Linotype representative calls, he picks up and reads the slugs.



Miniature reproduction of colorful 24 page booklet, plastic bound, 8½ in. by 11 in., issued by Harris-Seybold Co. Available upon request.

Colorful Offset Booklet

WHY Offset Lithography is on the March is explained to buyers of printing and to those contemplating entering the offset field is the title of a 24 page booklet being distributed by the Harris-Seybold Co. The booklet is directed to buyers of printing and those contemplating entrance into the offset-lith field.

Charts show the growth of lithography and its markets. The pages produced in color, black and white, and duotone are examples of work done on the new Harris Model 122 single color offset press. Four pages of samples in color show the variety of work now being produced by offset-lithography.

The booklet is also intended to serve as a primer for those not familar with the process. Lithography's relation to other printing processes is explained by means of diagrams. The various steps in the process, from art preparation, through camera and platemaking, to presswork, are described. Offset's adaptability to many paper stocks is demonstrated by the variety of finishes used.

All Purpose Mailing Systems

ALL Purpose Metal Equipment Corp., manufactures All Purpose Direct Mail Systems for volume handling of letters, catalogs, bulletins, folders, and other types of mailing pieces. Heart of the All Purpose Mailing System is the hook-on tray. This steel tray is designed with a flared edge at the back, which permits it to be hooked on All Purpose fixtures designed for simplifying and speeding mailing operations.

All Purpose direct mail tables are built of steel and are painted in olive green or office gray colors. In most installations regular All Purpose whirling racks are fitted to the direct mail tables to secure unobstructed working space for sorting and stuffing operations. Mail pieces are kept on the move by placing them in the hook-on trays, which are hooked to whirling racks. When the trays are filled, they are taken off the whirling racks and placed on traveling racks, and rolled along to the next mailing operation.

All Purpose direct Mail systems are engineered for companies and list houses who mail in large quantities. Further information will be furnished by *Printing Equipment Engineer.*

View showing installation of All Purpose Mailing Systems. Designed for volume handling of mailing pieces.

Hoe Six-color Offset Press

DELIVERIES on the Hoe six-color convertible offset press are scheduled to begin early next year.

According to George G. Carnegie, jr., these machines will be sheet-fed with a maximum size sheet of 50 in. by 72 in. at speeds ranging up to 6000 i.p.h. They will be equipped with Christensen pile feeders utilizing the Hoe web-type principle of registering the sheet while it is in motion. The sheet never stops from the moment it is picked up by the feeder until it reaches the delivery.

Close registration will be maintained on this six-color press, it is claimed, by the principle of holding each sheet in the same grippers and at constant speed through the entire printing operation or from feeder to delivery. Traveling gripper bars engage and retain each sheet until it is entirely printed, which in this case will be through six printing units. These bars are supported by chains which convey the bars from one unit to the next. The bars are locked into the impression cylinder of each unit as the impression is made, becoming an integral part of the cylinder to insure registration.

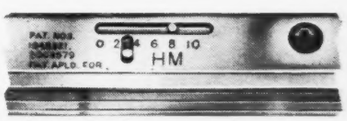
Automatic register control is achieved through the use of push buttons at the delivery end of the press which adjust the plate cylinders in four directions—latterly and circumferentially. With this arrangement, the pressman is enabled to swing the plate cylinder forward or back on its own axis or move it to the right or left while the press is running and while he is watching the sheets on the delivery pile.

A lock-up mechanism in conjunction with pre-registering of plates away from the press, it is stated, simplifies and speeds up the job of plating the machine, at the same time preventing distortion of the plates.

Manufacturer further states that more versatile work will be possible on the Hoe six-color offset press. Re-run of sheets in order to obtain special effects, tints or overprints will be largely eliminated with six colors available in a single operation. This press will be the first six-color sheet-fed offset press to be constructed. The dimensions are 60 ft. long, 14 ft. wide, 8 ft. high and the weight will be approx. 93 T.

Small Size Challenge Hi-Speed Quoin

A 3 in. or baby size quoin has been added to the Hi-Speed Quoin line of the Challenge Machinery Co. Previously these quoins were available in six lengths from 4½ to 12 in. The Hi-Speed Quoin is a self-contained unit



which features a register indicator. When the quoin is expanded, a steel indicator pin travels in a slot numbered to show the number of points the quoin has been expanded. When unlocking, the number under the indicator pin is noted. When relocking, the key is turned until the indicator pin reaches the previously indicated number. Further information may be secured upon request to *Printing Equipment Engineer.*

(Continued on Page 104)

Plastic Plate *laminated from thermoplastic materials for printing on rotary newspaper presses developed by California pressman — As high as 625,000 impressions claimed*

ACCORDING to Jack Stratton[1], a laminated thermoplastic plate for printing on rotary newspaper presses has been developed by William C. Burnett. Burnett is a Los Angeles newspaper pressman. After the plate (approx. 0.065 in. thick) has been fabricated, it is mounted on a curved blank with rubber cement or double-coated Scotch tape, so that both laminated plastic plate and the plate blank are of the same general dimension as the conventional stereotype cast metal plate.

The laminated cellulose acetate-cellulose nitrate page-size plates for direct printing on rotary newspaper presses are made from the usual newspaper matrix. They were first used in the Los Angeles *Examiner's* pressroom six years ago, but it wasn't until a year ago that they were applied commercially. Burnett, in cooperation with Ran Miller, of Kirk Plastic Co., produced the first plate in 1941.

For three years, Burnett developed refinements to produce an economical plate, although no plates were run on a press. In 1945, the *Examiner* used one for a long run. During 1946, the same pressroom utilized eight of the plastic plates for long runs. The plates contained 100 line screen halftones. It is claimed that runs of 625,000 without deterioration have been made with the acetate-nitrate lamination.

Producing the Laminated Plates

In producing laminated plates, Burnett uses cellulose nitrate sheets, 0.003 in. to 0.005 in. thick for the printing face itself. The nitrate's toughness and resiliency contribute durability and wearing qualities to the plates.

The cellulose actetate sheets, 0.060 in. thick, are claimed to add high impact strength, stability and resistance to fatigue to the laminated combination. The two materials bond quickly and permanently under heat and pressure.

The thickness of the lamination was determined by the tolerance with which standard rotary press blanks or "dummies" clear the paper on the press. The clearance is approx. 0.065 in., which is the thickness of the lamination. Throughout, Burnett has planned the development to fit, and so far as is possible, to be made by equipment common to newspaper stereotyping departments. The only extra piece of equipment is a laminating press.

Preparation of Plate

A fiber matrix, made in stereotyping rooms of newspapers or furnished by advertisers and news service syndicates, is the starting point in making the printing face of the plate. The matrix, however, must be overlaid with adhesive backed aluminum foil or painted with a colloidal solution of graphite which serves as a parting agent. Use of foil or colloidal solutions of graphite prevent adherence of the nitrate facing to the matrix in the laminating process.

In most cases, the foil is preferred, and a mat so treated may be used to produce several printing plates. The graphite solution, however, must be reapplied for each operation.

Application of the foil is made with a matrix roller commonly used in stereotyping processes. The sheet of foil, adhesive side up, is placed on a blank printer's form. The matrix, face down, is laid on the foil. A felt pad is next applied to press the higher elevations of the mat against the adhesive backing: acting as a cushion, it reduces the possibility of fracturing or flattening the matrix. Above the stack a ¼ in. Neoprene sheet is placed to add a cushioning effect and to prevent creep.

No heat is applied in running the stack under the roller. The pressure applied is sufficient to drive elevations of the mat firmly against the adhesive back of the foil. In this way tackiness of the foil is avoided. It will be subsequently pressed tightly into the depressions during the laminating process.

Laminating Printing Plate

In laminating, the felt pad acts as the base of the press load, and on this the Neoprene sheet is placed to press elevations of the foil-covered matrix deeply into the thermoplastic materials. The mat is laid foil side up; the cellulose nitrate sheet and cellulose acetate sheet are then laid up in that order. A smooth surfaced metal sheet, preferably of copper or aluminum, at least ⅛ in. thick is applied finally, to prevent adhesion of the plastics backing to the heated press platen. In this position, the metal sheet also stabilizes the stack and aids in exerting an even pressure.

Thus, from bottom to top, the press load consists of felt pad, Neoprene sheet, foiled mat, cellulose nitrate sheet, cellulose acetate sheet and metal plate.

Pressure of 300 p.s.i., at 300 deg. F. is applied for 2 min. However, the nature of the thermoplastic materials permits some latitude in pressure, temperature and time. Many satisfactory plates have been fabricated in longer periods with lower heat and pressure. Small air blowers accelerate cooling when the lamination is drawn from the press. After a few minutes the metal plate and pads may be removed, and the mat stripped from the completed form.

Not Suited to Rapid Plate Changes

Because production of the thermoplastic plate takes approximately 1 hr., only nine of them have so far been used by the *Examiner*. A disadvantage of the acetate-nitrate lamination is its unsuitability to rapid changes for a succession of made-over newspaper editions, where speed in publishing a daily paper is a principal requirement. They are well-suited, however, for plates which can be made up in advance to run entirely through an edition of several hundred thousand copies.

According to Mr. Stratton, results based on endurance and fine printing indicate the *Examiner* will increase its use of acetate-nitrate plates in 1947. In anticipation of more extensive use and general application of the plates in other Los Angeles press rooms, Burnett in partnership with J. H. Fritz, also a pressman, has equipped a laminating shop.

Durability of Laminated Plates

It is claimed that runs of 625,000 impressions have been made with the acetate-nitrate lamination and as yet acetate-nitrate plates have not had sufficiently long press runs to produce deterioration. It is also claimed that the fine molecular grain of the cellulose-nitrate printing surface inhibits ink spots in halftones.

[1]Writing in April *Plastics*.

Laminated Plastic Rotary Press Plate — Illustrations Show How It Is Fabricated

1—The standard stereotype matrix is used in producing the laminated cellulose acetate-cellulose rotary printing plate. Here the five-layer load is inspected before going under the stereotype mat roller for application of aluminum foil to the matrix to prevent adherance of the nitrate facing of the plate to the matrix during the laminating process.

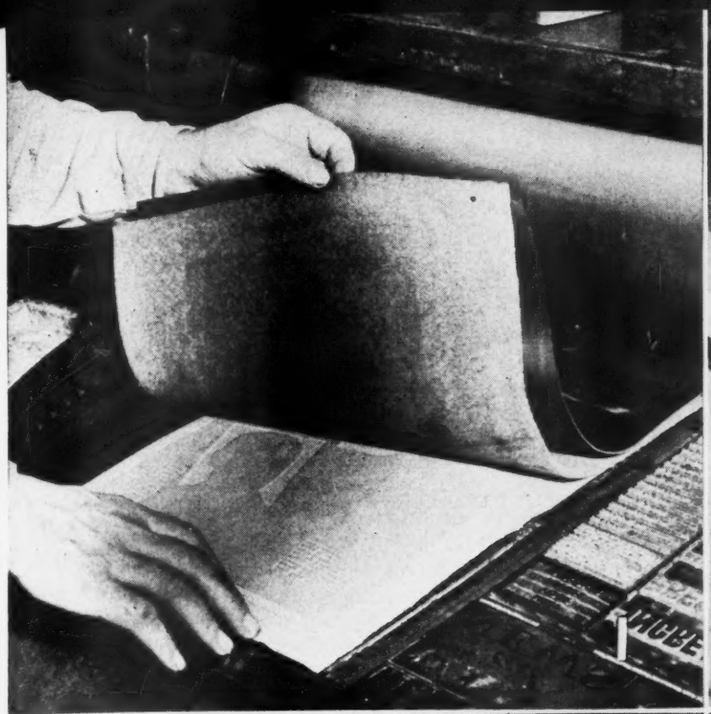
2—A cellulose nitrate sheet (from 0.003 in. to 0.005 in. thick) is placed on the foiled matrix prior to lamination of a thermoplastic rotary press plate. Laminating operation is done in a direct pressure type of press.

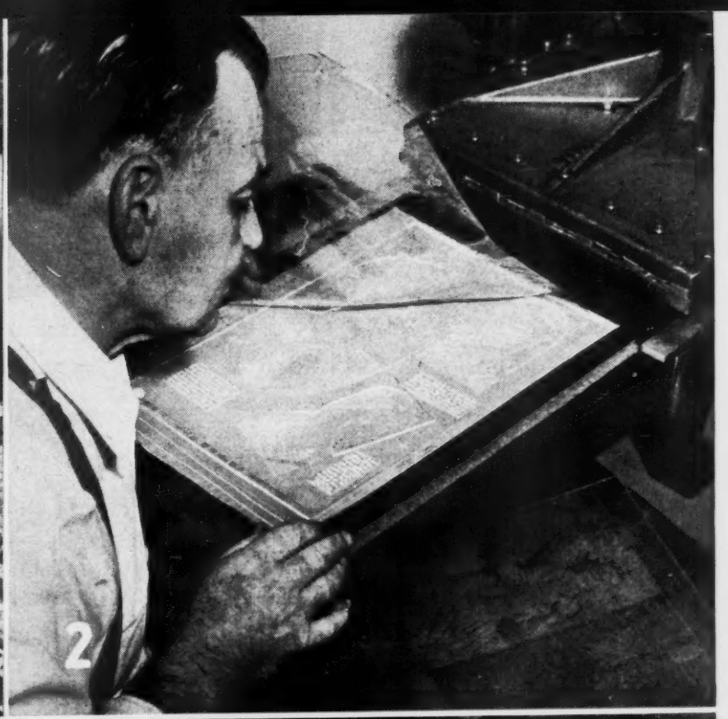
3—The last item to be added to the press load is an aluminum plate (⅛ in. thick). This plate prevents adherence of the cellulose acetate sheet (0.060 in. thick) to the platen of the direct-pressure press.

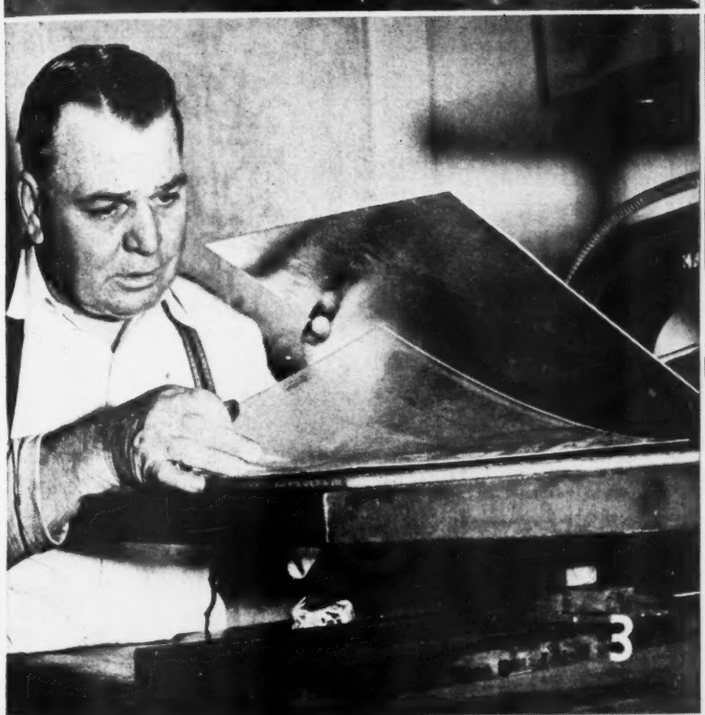
4—Cooling of the plate is accelerated by the use of small blowers after withdrawal of the laminated printing plate from the press.

5—The finished thermoplastic laminated plastic plate is curved manually on a dummy plate or curved blank. For this purpose, rubber cement or double-faced Scotch tape is used.

6—Pressman is placing the combination plastic plate-dummy plate on plate cylinder of the press where it is locked up in the usual manner.







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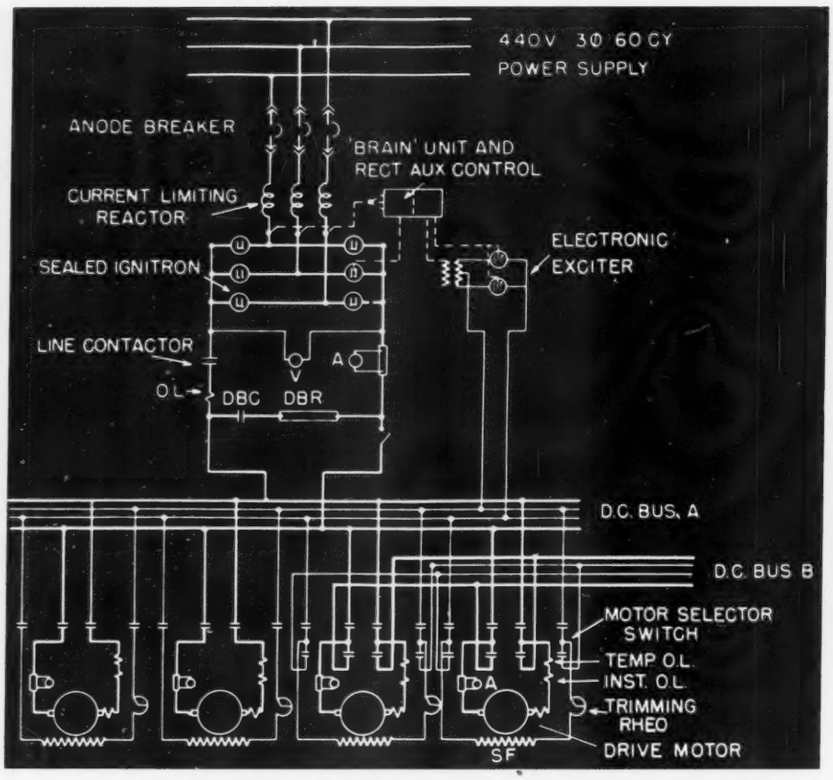


Fig. 2.

Electronic Drive System for Rotary Web Presses

By W. V. GOUGH*

**Industrial Divisions, General Electric Co., Schenectady, N. Y.*

ELECTRONIC drives, while new to the printing industry, are known and thoroughly proven in many other industries. In the last ten years, over 100,000 kw of sealed rectifiers have been installed in such industries as steel, mining, textile, machine tool, and metropolitan transportation. They economically change alternating current to direct current for applications where the wider speed range of a direct-current motor is required. These industries now accept the electronic tube as fully meeting their strict requirements of performance and reliability. These systems are generally known as constant voltage rectification.

An electronic motor control system known as Thy-mo-trol changes alternating current to direct current to take advantage of the inherent advantages of a d-c motor on an adjustable speed application. But the tube output is so controlled that an adjustable direct-current voltage is made available at the motor terminals without the aid of the heretofore conventional armature and field resistors. This system allows more closely controlled speed, smoother acceleration and deceleration, and higher efficiency.

The new G-E electronic printing press drive is an expansion of the Thy-mo-trol drive into the power range of all modern presses. It is tailored to meet press room requirements, and designed to operate directly from a 440-volt power supply.

Six sealed ignitron power tubes are connected in a double way circuit, two in each phase of a 3-phase, 440-volt, a-c power supply, and produce 550 volts d-c. These ignitron tubes act much on the same principle as the rectifier tube in a radio except that they are of sturdy industrial construction (Fig. 1). If all tubes are phased full on, a direct-current supply of constant 550-volts potential will be obtained. However, by controlling the time of firing (passing of current) of each tube, much the same as timing a six-cylinder automobile engine, a voltage anywhere from 0 to 550 volts can be obtained and accurately controlled. This may be used for the motor armature supply circuit. A similar controlled rectifier circuit is provided for field supply.

Units of this type can be supplied up to and including 500 kw in a single cubicle.

Drive Requirements

In developing this drive for the printing industry, the following requirements were considered.

Basically, all rotary web presses, regardless of the nature of printing involved, have the same operating requirements:

(1) Make ready
(2) Threading in web
(3) Acceleration to production speed
(4) Deceleration to threading speed
(5) Emergency stop

To make ready, the press drive must be capable of accurately jogging or inching to spot the cylinders for mounting plates and checking register.

The starting - torque requirements, while not severe, are subject to considerable variation because of changes in static friction between cold and warm bearings, and because of changes in the number of press units that may be combined to form an integral press.

While starting torques may vary from normal to 175 per cent, it is essential that the break-away be uniformly smooth.

The web-threading operation requires a combination of jogging and continuous slow motion to enable the operators to lead the web through the machine. The continuous slow-motion speed must be maintained substantially steady regardless of load changes, and equal to approximately 35 fpm. Acceleration from rest to continuous slow motion must be smooth and without any tendency to overshoot. For modern, high-speed presses, the slow-motion speed is approximately 2 per cent of maximum speed.

Acceleration to production speeds must be performed in a smooth, uniform manner to prevent web breaks and excessive changes in web tension. Production speeds may vary from one-half to full speed depending upon the quality of paper, color control, and other operating limitations.

A minimum of speed regulation with changes in load is important for color

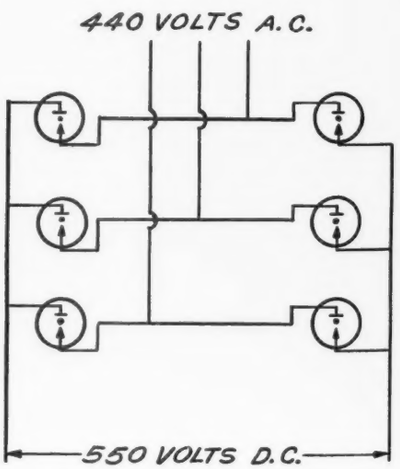


Fig. 1.

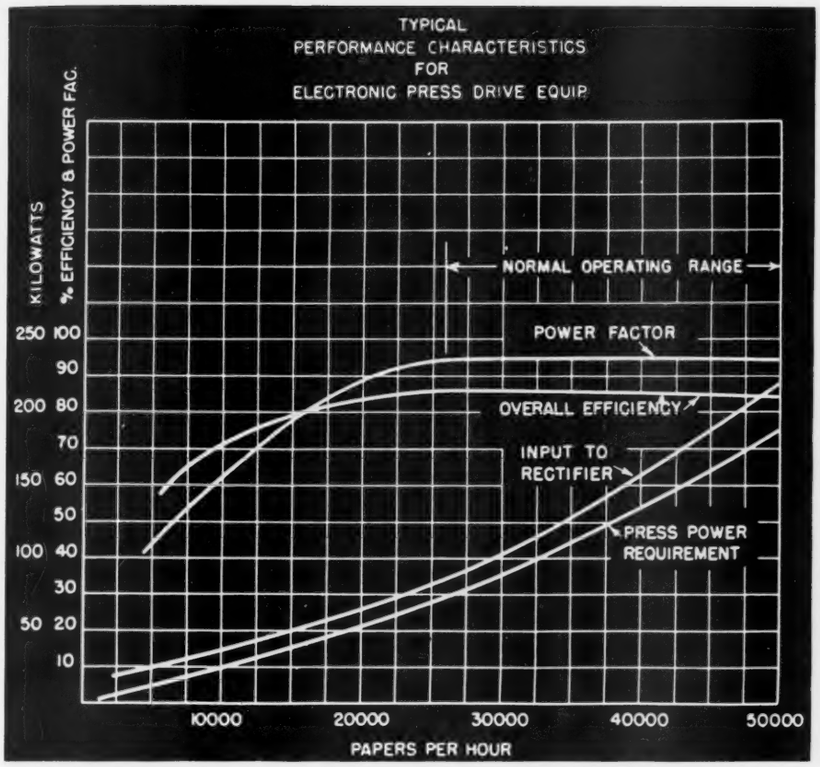


Fig. 3.

printing in rotogravure and magazine press operations, in order to maintain uniform color quality and printing register. For black-and-white newspaper presses this is not so important.

When slowing down the presses to lower production speeds or for stopping, smooth speed changing is similarly required.

Quick stopping must be available in the event of web failure, folder jams, or other abnormal conditions. This prevents an undue waste of paper when a break occurs, and minimizes the loss of production time by enabling the operator to clear the machine and re-thread as soon as possible.

The normal stopping time for high-speed machines is about 5 to 8 seconds, depending on the speed.

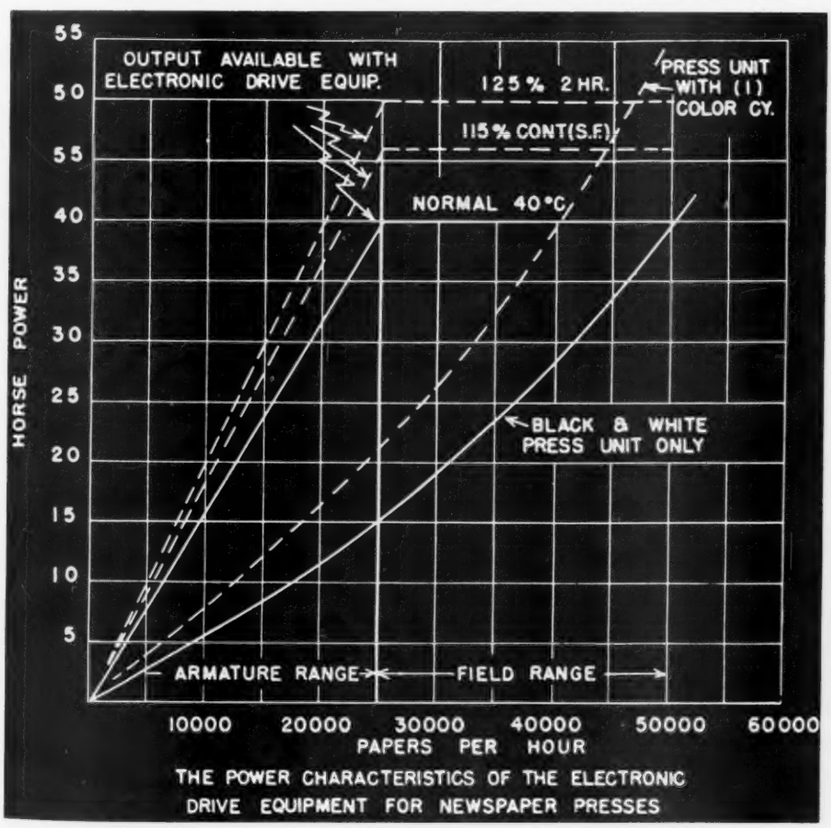


Fig. 4.

Electronic Drive

Electronic drive has the fundamental operating advantages of a d-c motor with an adjustable-voltage control system (Fig. 2).

An electronic "brain unit" controls the phase-shift network of the rectifiers and, therefore, the motor voltage. A small motor-operated potentiometer is used with it to provide speed adjustment.

At any speed setting, including threading speed, regulation with load is kept to a minimum by an IR-compensation circuit which increases the rectifier voltage as the motor current increases. The drive for a press, therefore, involves a single d-c motor, which can be connected by simple and direct means.

When two rectifiers operate in parallel with their respective motors each mechanically connected to the same drive shaft, as on the newspaper presses, their electronic brain units are controlled from one speed-adjusting potentiometer. Excellent division of the load between rectifiers is accomplished by making one the master and regulating the current in the other with respect to the current in the master.

The press motors have a two-to-one field range, which corresponds to the usual operating-speed range required on a press. Thus, for normal operating speeds, the rectifiers operate at rated voltage, with the highest efficiency and power factor (Fig. 3).

There are other properties in using two-to-one motors. When jogging or threading, with full field on the motor, the higher torque per ampere which is obtained effectively eases the burden on the rectifier and its control.

The constant-horsepower characteristic of the motor over its field range is useful too, in both normal and emergency operation. As shown in Fig. 4, if color printing is done on a press, more torque is required than when making black - and - white newspapers. Fortunately, color is run at a lower speed. Thus, the constant-horsepower characteristic fills the bill nicely.

Under emergency conditions, if a motor is lost from a combination, those remaining can carry the torque load at stronger field and reduced speed.

An electronic field supply is provided, which is regulated to weaken the motor fields above base speed.

Control

The feeder breaker, protective reactor, electronic rectifiers, and magnetic control are all located in a set of four metal-enclosed cubicles, factory wired and assembled for installation. One control per folder is required for maximum flexibility. (See Fig. 5). Each unit lends

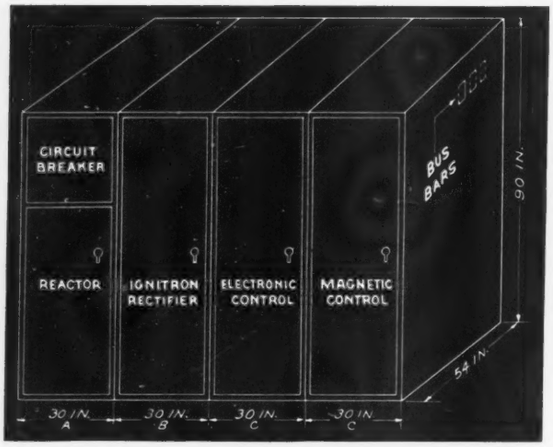


Fig. 5.—In the control mechanism of the G-E electronic drive system, the feeder breaker, protective reactor, electronic rectifiers and magnetic controls are located in set of four metal-enclosed cubicles, factory-wired and assembled for installation.

itself to the conception of an enclosed line of control with a through connecting bus which ties each control to the 440-volt line.

Load Center Arrangement

The complete electronic drive system lends itself particularly well to the conception of unit load centers in industrial plants. This system fosters distribution at high voltage within the plant. It steps down to the desired voltage through transformers located at the point of utilization.

By bringing high voltage directly into the control room and stepping down to 440 volts with an indoor transformer connected through a suitable protective breaker to the cubicle line-up of control, we provide the installation with a compact easily-maintained control room.

Conclusions—An electronic printing drive provides the following advantages:

(1) The drive-motor arrangement is simplified, through the elimination of the slow-motion drive and its mechanical parts. This enables drive motors to be applied to presses in the most direct manner, thus saving space and installation expense.

(2) Flat efficiency and power-factor characteristics over a wide production speed range cannot be equalled by any other type of drive. Power savings are substantial and may be effectively utilized.

(3) Jogging and threading operation is consistently smooth and independent of load conditions. A large number of speed points above threading speed provide smoothness of press control to minimize paper breaks.

The employment of rectifiers of various sizes and their ability to function successfully in parallel, together with the fact that full rectifier output is available at half speed, assures a flexible standby system for emergency operation at reduced speeds. Similarly, the inherent constant-horsepower characteristics of the drive motors over their field range assures adequate drive capacity for color supplements at reduced speeds.

Protest against poor quality of plastic plates and electrotypes registered at Pacific Newspaper Mechanical Conference by Stereotype Clinic

By STAFF WRITER

THE 11th meeting of the Pacific Newspaper Mechanical Conference was held in Los Angeles at the Biltmore hotel, May 10 and 11. The meeting this year was held to two days by eliminating the entertainment part of the conference. Saturday night, however, was open and the delegates were given opportunity to visit the local newspaper plants.

The Pacific Newspaper Mechanical Conference comprises the eleven western states and covers a large territory. The registration of 410 was greater than at any former meeting.

The conference opened with a luncheon on Saturday and closed with a banquet Sunday evening. The speaker at the Saturday luncheon was Manchester Boddy, publisher of the Los Angeles *Daily News*. Mr. Boddy recently returned from a five months tour of Europe, most of which time was spent in Germany. He made the prediction that the bulk of trade would be transferred from the Atlantic to the Pacific—from the eastern part of the United States to the western part. His talk was interesting and was well received.

At the Sunday evening banquet, J. J. Shea, General Mechanical Superintendent, of the Hearst Newspapers, was a surprise visitor, having stopped over between his other business appointments. He was called on to address the meeting and responded with a short but interesting talk.

Clinics were held for the composing rooms of 10 machines and more and for composing rooms of less than ten machines. This gave the smaller publications a chance to discuss their problems. Both meetings were well attended. Another clinic was held for the color pressmen and color stereotypers jointly. This afforded an opportunity to get at the root of the troubles experienced in color printing and comic and magazine sections. The other clinics comprised the web pressmen, composing room machinists, engravers, business managers and mechanical superintendents, and stereotypers.

Large Composing Room Clinic

Harry Parsons, of the San Diego *Journal*, chairman of the Large Composing Rooms Clinic, opened the meeting with the statement: "There are about fifty present. No one present can bring out anything that someone doesn't know or anything that all of you do know. Many know of innovations, new methods, new ideas. We should each compare our ideas. We will touch on business relations and labor relations; responsibility to the publisher and what the publisher expects of his composing room foremen: (1) Production and cost. (2) Co-ordination. (3) Time element. (4) Quality.

"Production: We have today not only in printing but in all lines or industry a new situation since the war. One of them is the unwillingness generally of men to perform a full day's work as we knew it in pre-war days. Wage scales have increased making it difficult for anyone heading mechanical departments to produce newspapers at a cost in ratio to the cost that existed a few years ago. How are we going to increase production and lower the cost of a quality product, taking into consideration conditions facing us in composing rooms today? It means leadership efficiency more than ever, equipment of the best quality possible, closer coordination, elimination of all waste, whether time or material. Labor will no longer be driven. We must develop leadership."

Ralph Titus, assistant state printer of Sacramento, opened the discussion with the following remarks: "There has been a vast change in composing rooms throughout the country since the beginning of the war. We have been asked by our chairman: 'What is a leader?' We can give definitions of leaders but that is not what you want. You want leaders. How do you get them? You make them. The biggest difficulty in composing rooms is the fact that employees do not

1948 Officers of the Pacific Newspaper Mechanical Conference—(Left to right) Les Crebassa, Washington Representative, *Times*, Seattle, Wash.; W. E. Wert, Northern Vice Pres., *Wall Street Journal*, San Francisco, Calif.; Fred J. Moyer, Southern Secretary, *Daily News*, Los Angeles; J. W. Fitzsimmons, President, *Call-Bulletin*, San Francisco; Edw. N. Conley, Northern Secretary, *Chronicle*, San Francisco; Harold Winn, Southern Vice Pres., *Citizen-News*, Hollywood; Louis Otto, Northwest Vice Pres., *Journal*, Portland, Oregon.

thoroughly understand what happens to production. In order to have concrete production, in order that the man understands what happens to it, he must do the work himself. When he has been fully trained, you have a leader. There are too many 13-em printers. There are too many men in the ad room, who only know how to put a border around the ad and tie up the display. I believe every composing room foreman owes it to his publisher to train the people under his direction to do the different kinds of work. This is not always possible, but you can train every position in the composing room at least three deep. You would be surprised how much more you can get from the individual employee if the foreman will take a little of his time to help the individual man, to encourage him, to study him. If you are going to do a good job, you don't work hard yourself. Too many foremen try to do four men's work while the employer is paying the foreman to supervise."

Other subjects discussed were: Cooperation, organization, production costs, lost time, equipment, ad and editorial copy, shortage of labor and apprentices.

Business Managers and Superintendents

The clinic for the business managers and mechanical superintendents was presided over by Harold Winn, of the Hollywood *Citizen-News*. There were about sixty in attendance.

Many interesting subjects were discussed including problems of individual plants and specific instances of help were

Mechanical Executive Delelgates to Pacific Newspaper Mechanical Conference—(Left to right) Standing: Stanley J. Wills, *Post-Advocate*, Alhambra, Calif.; L. L. McFall, first president of the Conference, *Sun-Telegram*, San Bernardino, Calif.; Roger Hicks, *Daily News*, Los Angeles; W. P. Carlile, *Times*, Palo Alto, Calif.; Charles Pirie, *Chronicle*, San Francisco.

Seated: Edw. K. Sparks, President, *Examiner*, Los Angeles; J. J. Shea, General Mechanical Superintendent, Hearst Newspapers, New York; J. W. Fitzsimmons, 1948 President, *Call-Bulletin*, San Francisco; Les Crebassa, Washington Representative, *Times*, Seattle, Wash.; Ralph Prickett, *Herald-Express*, Los Angeles.

The Passing of Authority—Edw. K. Sparks, *Examiner*, Los Angeles, 1947 President hands gavel to J. W. Fitzsimmons, *Call-Bulletin*, San Francisco, the 1948 President.

obtained in these cases. Some of these subjects included the 9 col. classified pages, 2 and 3 pt. col. rule for cutting page width, 1 pt. slug indention, newsprint quality, nickeling of plates and ideas for filing "hold" ads.

Glen Hutchinson, of the Los Angeles *Times*, talked on the modernization of his plant which was recently completed, giving the clinic a word picture of one of the most modern plants in the world.

An interesting discussion about time study in newspaper plants was engendered by the presence of Alex DeBakcsy, of the Fontana *Herald*. Mr. DeBakcsy is one of a committee of the California Newspaper Publishers Association, named to do research work on time studies for California newspapers. The conference went on record as backing this committee in its efforts.

Small Composing Room Clinic

The clinic for the small composing rooms with S. J. Wills, of the Alhambra *Post-Advocate*, as chairman, was attended by about 75 delegates. Among the topics discussed were: Rest periods, plastic cuts, shortage of labor and apprentices, equipment, assembling of ads, filing of small ads and cuts, and the housing shortage.

Stereo Clinic

Ralph Pickett, of the Los Angeles *Herald-Express*, was chairman of the stereotypers' meeting. This meeting was well attended and filled the conference room to overflowing. There were at least 100 present.

Electrotypes and plastic plates were gone over thoroughly by the Stereotype Clinic. The chief complaing with respect to the plastic plate is lack of depth in the non-printing areas. It was concluded that an electrotype can be corrected before stereotype molding but it is difficult to do anything with a defective plastic plate. Complaints were made in the case of both electrotypes and plastic plates with respect to improperly etched photoengravings from which both plates are reproduced. Also, complaints were made about distortion or mis-register of color in plastic plates, one stereotyper stating he had found as much as 0.006 in. variation between the black and color plates. One speaker asserted that the fault lies with the man who handles the work in the first place because he does not notify the platemaker for what purpose the plate is to be used.

In the case of a shallow electrotype, the stereotyper can rout out the open spaces to secure added depth. With the plastic plate all he can do is to try to pack out the mat because the plastic plate can't be routed.

It seemed to be the consensus of opinion that the chief blame for poor plates rests with the advertising agency doing the ordering for newspaper plates. One executive stated: "We have had the advertising agency representatives attend our meetings but it hasn't helped any." Forcefully, the men attending the clinic stated their chief objection to defective plates is the lack of time afforded to try to correct a plate if it is defective. Usually, the plate must be used promptly after receipt by the newspaper.

The stereotyping executives stated they could not reproduce something in the mat that is not in the original plate from which they do the molding. Upon the motion being put, a resolution was passed unanimously. The motion, to be presented to advertising agencies, protests against the poor quality of plastic and electrotype plates.

Machinists' Clinic

The composing room machinists met with Edw. O. Strong, of the California State Printing Office, as chairman. After an opening statement, Mr. Strong started the discussion by asking for what is new, and this brought out the following: New type strip-casting machine, new cleaning compound called "Actusol," fluorescent lights for machines, automatic spaceband cleaner, and some new gadgets of local origin.

It was reported from Sacramento that music in the composing and editorial rooms had been tried and little opposition to it was found. Others reported it a success. The apprentice problem came up for considerable discussion but no solution arrived at.

The machinists met Saturday afternoon and when adjournment time came asked for another meeting on Sunday morning. The carry-over meeting lasted about three hours. The topics discussed included: large machines in small shops, metal, apprentices, needless running of machines and the contrasting of matrices.

Engraving Clinic

The chairman of the engravers' clinic was Roger Hicks, of the Los Angeles *Daily News*. This meeting was attended by about forty delegates and the discussions covered the following subjects: Zomag metal, how to handle copy, electrotypes, over-all depth of plates, patented mounting tapes, care of etching powder, shop ideas and gadgets.

Color Pressmen

The color pressmen and stereotypers' clinic was under the chairmanship of Edw. N. Conley, of the San Francisco *Chronicle*. The meeting was well attended and much interest shown. The topics under discussion included: Registering plates, shrinkage, paper, ink and mats. The mat problem was to be taken up with Fred Wartenburg of the Metropolitan Group, who was present and was one of the many interested listeners.

Officers Elected

San Francisco was selected as the meeting place for the 1948 conference. The new officers elected are: J. W. Fitzsimmons, of *Call-Bulletin*, San Francisco, president; W. E. Wert, *Wall Street Journal*, San Francisco, Vice President for the North; Harold Winn, *Citizen-News*, Hollywood, Vice President for the South; Louis Otto, Vice President for the Northwest; Edw. N. Conley, of the *Chronicle*, San Francisco, Secretary for the North; Fred J. Moyer, of the *Daily News*, Los Angeles, Secretary for the South. A new office was created—that of Washington representative; Les Crebassa, of the *Times*, Seattle, Wash., was elected to fill it.

Correction

In the April issue of *Printing Equipment Engineer* an erroneous quotation appeared with respect to one of the statements made by Don E. Crews at the recent Northwest Mechanical Conference. Mr. Crews, Vice President of Sam'l Bingham's Son Mfg. Co., discussed printing rollers and their troubles.

Our report of the conference reported Mr. Crews as saying he could see little difference in printing value between the rubber roller and the glycerine and glue product. This statement should have read: "Mr. Crews said that he could see little difference in printing value between the rubber roller and the synthetic rubber roller."

We are glad to make the correction.

Mechanized material handling equipment resulted in a new and improved method of storing small stocks of frequently-needed paper for George F. McKiernan & Co., Chicago printing firm. The Transtacker lifts 750 lb. boxes of paper stock to desired level beside the storage racks. Both rack and Transtacker platform are equipped with special rollers, enabling one man to push the load into position. Previous to the use of the Transtacker, similar packages of stock were warehoused in single package lots to make them readily accessible.

Experience

With industrial paper-handling equipment in Chicago printing plant related

A SINGLE electric industrial truck which has paid for itself in four months. A material handling system that is effecting savings at the rate of $8000 per year. These results have more than justified the installation of mechanized material handling equipment by George F. McKiernan & Co., Chicago printers and lithographers, in the opinion of the firm's treasurer, George F. McKiernan—and they have convinced McKiernan that analysis of material handling problems is just as important as analysis of production problems.

"I recommend to business men in general and printers in particular that they analyze their material handling problems and their effect on production costs," McKiernan states in discussing his company's installation, "that they devise an efficient system to fit their plants, and then call in experts to improve their own conclusions."

Key unit in the McKiernan material handling system is the Transtacker, Automatic Transportation Co.'s motorized hand truck counterpart of fork and platform high-lift trucks.

Purchased in January for $1800, the Transtacker has saved the McKiernan Company more than $700 in labor costs and approximately twice that amount in warehouse space and extra hauling. By substituting electrical energy for manual effort, it enables one employee to do the work of two men in handling particular types of stock and with far less physical strain.

Through higher and more orderly stacking of paper stock and finished goods, the Transtacker in effect adds 25 per cent to the company's storage area, which is the equivalent of ten per cent of the total plant area of 29,000 sq. ft. At 80c per square foot—the actual operational rental cost of the building—this nets an annual saving of $2320.

The Transtacker thus effects a total annual "profit" of more than $4400 on an original investment of $1800.

Along with the trucks, the McKiernan Company installed steel storage racks for certain types of paper stocks. "This is one of the best-paying investments we have made—skid and case racks save aisle space and shorten hauls by condensing storage areas," McKiernan states.

From 30 to 40 different kinds and grades of paper are kept in stock. These are now stored in 16 steel racks containing from four to six tiered bins each. Each rack holds up to six cases of paper stocks or up to four partial skids. Any case or skid can be removed or stored with the Transtacker without disturbing other cases or skids. Special rollers have been installed on the Transtacker platform and on the edges of the racks, thus enabling one operator to roll the cases on or off.

Prior to the purchase of the Transtacker, the company warehoused most of the paper supply in single package lots to make it readily accessible. Even if the paper had been stacked to the maximum of two or three packages high by the strain of manual effort, there was no way of telling when the bottom or middle package would be required—and getting at it would have necessitated the repetition of back-breaking labor.

"Because the Transtacker frees them of this toil, making the storage of paper a virtually effortless task and also making them available for more productive and hence better paying work, the men are particularly happy with this system," McKiernan points out.

EXPLANATION OF EUTECTIC POINT IN TYPE METAL

In answer to a question submitted from the floor at the April meeting of the Cleveland Club of Printing House Craftsmen. By Clarence Seaman, Vice President of Imperial Type Metal Co. Mr. Seaman spoke upon the subject: *Type Metals Explained.*

LEAD, when pure, melts at 621 deg. F., antimony at 1166 deg. F., and when 1 percent of antimony is alloyed with 99 percent lead the melting point is reduced to below 621 deg. F. Two percent of antimony causes a still further reduction, which continues, until the alloy contains approximately 12 to 13 percent antimony, balance lead, melting at 475 deg. F. From this point on, by increasing antimony, the point of complete melting increases with each percent instead of decreasing. Thus, there is a certain percentage having the lowest melting, which is approximately twelve percent. This point is called the eutectic point, meaning point of lowest melting temperature.

1947 Craftsmen's Convention to be Held at Saratoga Springs, N. Y.

THE 1947 convention of the International Craftsmen's Association will be held at Saratoga Springs, N. Y., August 31 and September 1, 2 and 3.—Dates fall on Sunday, Monday, Tuesday and Wednesday. Host club is the Albany Capitol District Club (Albany, N. Y.) of Printing House Craftsmen. Saratoga Springs is 35 miles north of Albany. Convention sessions will be held at the Grand Union Hotel at Saratoga Springs.

To actively manage the convention, the Albany Club has selected Harry F. Shaughnessy as general chairman. Mr. Shaughnessy is president of the Albany Club. He will be assisted by Co-Chairmen Vic Audenhove and Robert Bunn. Temporary pre-convention headquarters have been engaged at Room 827, 90 State St., Albany, N. Y.

Pending the formulation of the technical and educational program for the convention, the promotion committee tells Craftsmen about some of the attractions to be found at Saratoga Springs as well as in the immediate neighborhood.

In the town of Saratoga Springs are the Saratoga race track, various night clubs, the Petrified Gardens. Points of interest in the vicinity are Fort Ticonderoga, the Saratoga Battlefield, Lake George and General Electric Co.'s plant in Schenectady.

The entertainment committee, in cooperation with the Saratoga Chamber of Commerce, has arranged a New York Style show for the ladies, trips to points of interest, symphony concerts and Monty Woolley will appear in person.

The Grand Union Hotel operates exclusively on the American Plan. Hotels that operate on the European plan within a block of Convention Headquarters are the Rip Van Dam, New Worden and Adelphia.

The plant's material handling system includes two Transporter motorized hand trucks in addition to the Transtacker. The former units are used for all horizontal operations—hauling paper from receiving to storage, from storage to presses, and transporting finished jobs from pressroom to shipping—while the Transtacker is used for tiering and detiering stock in storage.

Savings of approximately $8000 annually will result from the entire system, McKiernan estimates, based on the year in which the two Transporters have been at work and the four months of Transtacker operation.

Combined labor and storage savings have already totalled more than the combined cost of the three units, McKiernan's figures show. Future savings will be clear profit, since the Transtacker and two Transporters have repaid their original cost in four months and one year, respectively.

"The Transporters, in fact, have actually paid for themselves a second time," McKiernan relates, "in an extra and unusual operation—that of handling much of our equipment when we moved into a new plant. They saved us more than $2000 in moving costs."

The company used its Transporters to load and unload all equipment except heavy presses and other heavy machines onto street trucks for movement from the old location to the new plant. Four men did the loading and unloading with the aid of the two motorized hand trucks, whereas eight men would have been required to do the same job manually.

Based on a wage rate of 85c per hour and $1.275 for overtime, the savings totaled $176.80 per week for the period of eleven weeks during which moving operations were in progress.

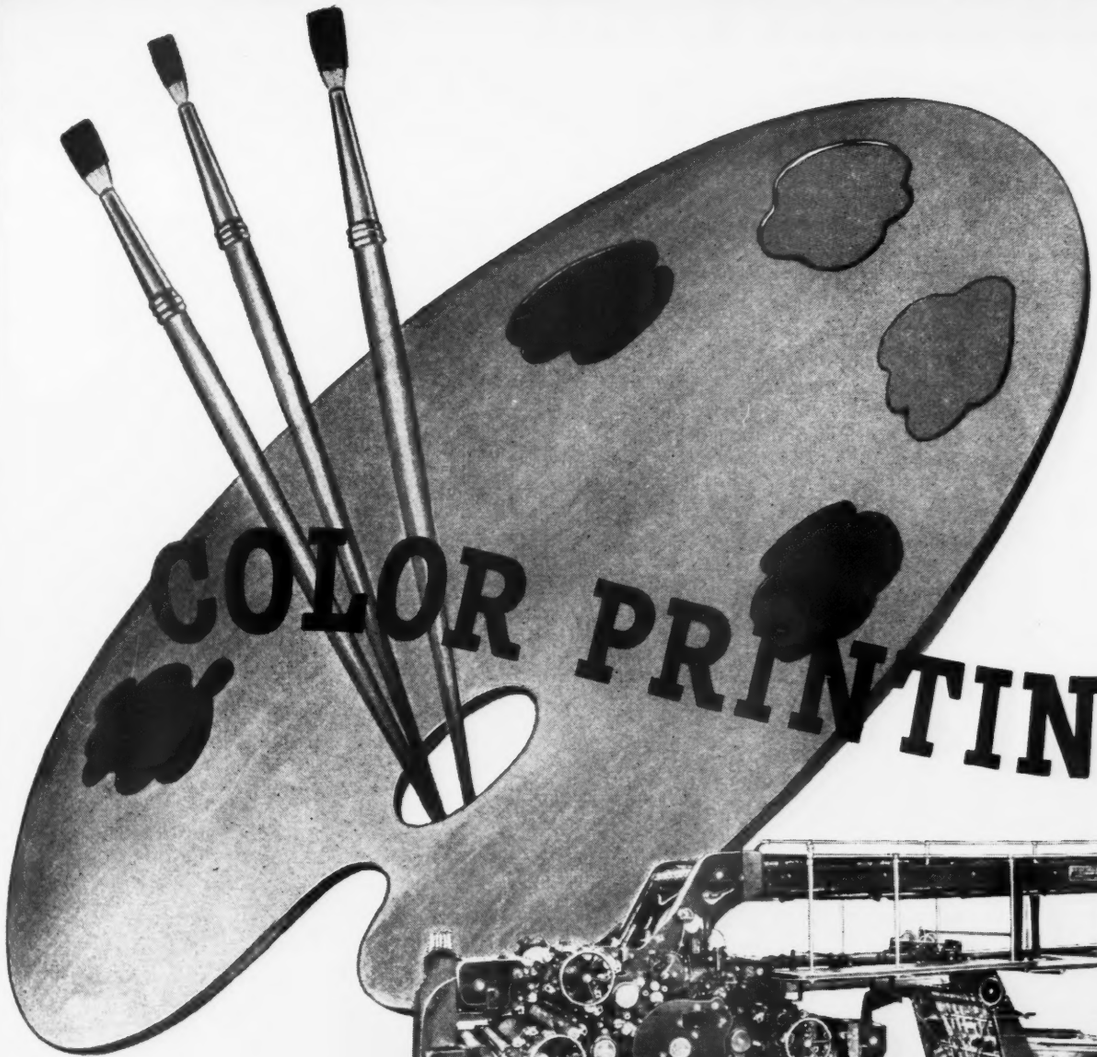
The Transporter, Automatic Transportation Co's. motorized hand truck is shown moving moving a 2720 lb. load of paper stock into place in the plant storage area near the presses. View taken in plant of George F. McKiernan & Co., Chicago printing firm. With heavy load and crowded quarters, one man handles the stock. At least two men were required to handle similar loads with manual-powered hand trucks before introduction of the truck shown here.

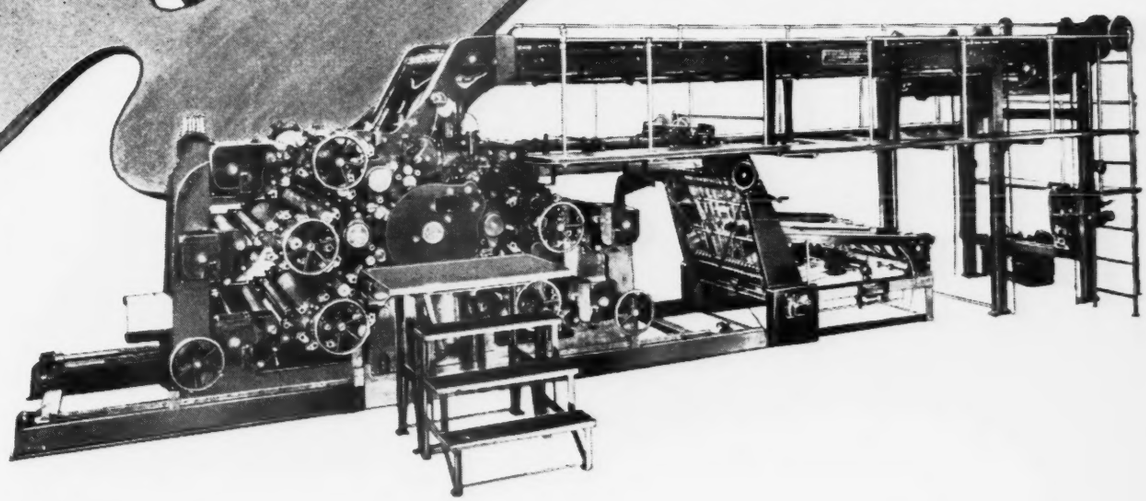
A Wasteful Practice

IN MANY shops not blessed with a premakeready department, or partial set-up for it, it is common practice when laying a form of plates on metal base to place a sheet of paper 0.007 in. thick under each plate. This is the custom when the 0.152 in. plate is used, which is more common than the use of 0.159 in. plates that eliminate underlaying (interlaying).

No matter which thickness of plate is used it is obvious that the first trial impression pulled from a mixed form of solid and light plates will be a bad start for makeready. If a moderate squeeze is used, the solid plates will not print and the light ones will punch. Any modification of squeeze will not help. The trial impression will still be a very poor and time-consuming base for marking out, which is a strong argument for premakeready.

The idea of placing a sheet of paper under the 0.152 in. plate when laying a form, while quite generally used, is silly. The time wasted in preparing these insets is considerable—very much so in a large pressroom. The same purpose is served by pulling trial impressions on two or three sheets of stock depending on its thickness, thereby dispensing with the insetting of blank sheets before placing the interlay in position.





...with the Cottrell five-color rotary...

This 36" x 48" sheet-fed rotary press runs at a speed of up to 6,000 sheets per hour in five colors.

Cottrell engineering assures results . . . and a Cottrell result is quality and profit.

C. B. COTTRELL & SONS CO.

Westerly, Rhode Island

New York: 25 E. 26th St. • Chicago: Daily News Bldg., 400 W. Madison St. • Claybourn Division: 3713 N. Humboldt Ave., Milwaukee, Wis. • Smyth-Horne, Ltd., 13 Bedford Row, London W.C. 1, Eng.

R 93 YEARS OF GROWING WITH THE PRINTING INDUSTRY

Cottrell

ANPA-AAAA JOINT COMMITTEE ON NEWSPAPER PRINTING REACTIVATED

AS the initial step in planning a long-range program for further improving the printing of national advertising in newspapers, through the cooperation of agencies and newspapers, the ANPA and AAAA have reactivated the Joint Committee on Newspaper Printing.

Over many years, the Joint Committee made notable contributions to improving the quality of newspaper advertising reproduction, with its reports on *Electros vs. Mats, Etching Depth of Halftones, Standard Thickness for Newspaper Electros,* and *Standard Colors for 4-Color Newspaper Printing.*

The ANPA will be represented on the Joint Committee by: Charles M. Kirk, Detroit *News;* R. W. Tranter, Boston *Herald Traveler;* Stanley Myers, Philadelphia *Bulletin;* Ben Dalgin, New York *Times;* and George P. Moyer, Nassau *Review-Star,* Hempstead Town (L. I.).

The AAAA members are: G. B. Dearnley, McCann-Erickson, Inc., New York; Ernest Donohue, Batten, Barton, Durstine & Osborn, Inc., New York; Eli Gordon, J. Walter Thompson Co., New York; Erwin Miessler, Needham, Louis and Brorby, Inc., Chicago; Henry Krieger, Honig-Cooper Company, San Francisco.

New England Composing Executives Meet in Conference at Holyoke, Mass.

THE annual two-day conference of the New England Daily Newspaper Composing Room Executives' Association was held at the Roger Smith Hotel, Holyoke, Mass., Saturday and Sunday, May 3 and 4.

The Saturday program consisted of registration and entertainment when the members were guests of manufacturer and supplier representatives during which informal discussions were held relative to the problems confronted in present day operation of newspaper composing rooms.

Sunday morning at 10 o'clock, members inspected the plant of the Holyoke *Transcript-Telegram*, host newspaper for this meeting. At 12:30 dinner was served in the main ballroom of the Roger Smith Hotel where nearly 100 members were welcomed by Arthur Ryan, Business Manager and William Dwight, Managing Editor of the *Transcript-Telegram.* Mr. Ryan, when introduced by President Joseph J. Mahoney as the man who welcomed the group to Holyoke eleven years ago for its first meeting said "He hoped they would come back again as he noticed that some of the corners at the office had been cleaned out for the first time since the last time he welcomed us."

The nominating committee reported the following slate of officers for 1947-48 who were unanimously elected: President — Edward J. Cunningham, Taunton, (Mass.) *Gazette*; Vice President—Victor J. Bressett, Keene, (N. H.) *Sentinel*; Secretary—Edwin A. Hutt, Keene (N. H.) *Sentinel*; Treasurer—Charles McGlashen, Brockton, (Mass.) *Enterprise.* Directors—Henry G. Jones, Portland, (Me.) *Herald-Express* and Raymond Cox, Bangor, (Me.) *Daily News.*

George W. Holloway, Mechanical Superintendent, Elizabeth (N. J.) *Journal*, was the guest speaker. His topic was: *Relations Between the Composing Room, Advertising Dept., and Advertiser.*

It was voted to hold the 1948 meeting at Taunton, Mass. The Taunton *Gazette* will be the host newspaper.

Ayer Cup Winner

THE Rutland (Vt.) *Herald* has been awarded the F. Wayland Ayer Cup, highest recognition in the 17th Annual Exhibition of Newspaper Typography conducted by N. W. Ayer & Son, Inc.

The paper was selected from more than 1000 entries in the Exhibition, which was open to all English-language dailies in the United States. The award was made on the basis of excellence of typography, makeup and presswork.

In addition to the Ayer Cup Award, Honorable Mentions were awarded to papers in the following circulation and format groups: Standard-size papers of more than 50,000 circulation: First Honorable Mention, New York (N. Y.) *Times*; Second Honorable Mention, *Christian Science Monitor*, Boston, Mass.; Third Honorable Mention, *Herald Tribune*, New York, N. Y.

Standard-size papers of from 10,000 to 50,000 circulation: First Honorable Mention, *The Sun*, Springfield, Ohio; Second Honorable Mention, Ithaca (N. Y.) *Journal*; Third Honorable Mention, Charleston (S. C.) *Evening Post.*

Standard-size papers of less than 10,000 circulation: First Honorable Mention, Boulder (Colo.) *Daily Camera*; Second Honorable Mention, *Public Opinion*, Chambersburg, Pa.; Third Honorable Mention, Winfield (Kan.) *Daily Courier.*

Tabloids, regardless of circulation: *Gazette & Daily*, York, Pa.

Judges of the Exhibition were Raymond Moley, author and journalist, associate editor of *Newsweek*; William Edwin Rudge, editor of *Print*; and Sol Hess, type designer and art director of Lanston Monotype Machine Co.

RUTLAND HERALD

House Approves Bill Revamping Welfare Set-Up

Truman Asks 400 Million For Greece, Turkey, Calls on U. S. To Save "Peace of the World"

Page one of Rutland (Vt.) *Herald*, for March 13, winner of the F. Wayland Ayer Cup in the 17th Annual Exhibition of Newspaper Typography, held in Philadelphia recently under the auspices of N. W. Ayer & Son, Inc.

The Webendorfer Div. of American Type Founders has delivered a business form web press to a Canadian firm. Combining both offset and rubber plate printing in the one machine, the press operates at 10,000 cylinder revolutions per hour on a web 18 in. wide, printing from cylinders 14 in. in circumference. The press is also equipped with antifriction roller bearings and automatic lubrication to all main bearings. The feed control mechanism utilizes an automatic tension system and a variable speed drive.

who rests, *rusts!*

—men or machinery, it's all the same. And the organization that is disposed to "let well enough alone" frequently has a special reserved seat for the parade of progress as it passes.

New methods replace those that may have been modern only yesterday; new machinery does more and better work, reduces effort and produces profits.

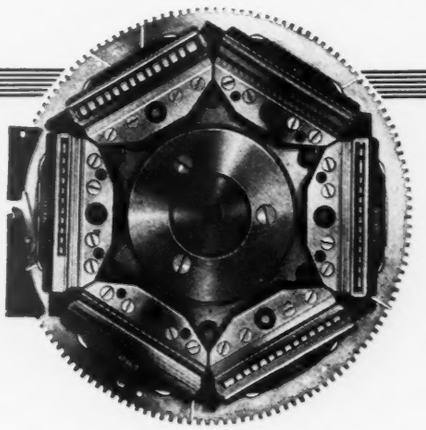
Blue Streak Linotypes are capable of this—*Blue Streaks and you!*

LINOTYPE · 29 RYERSON STREET · BROOKLYN 5, NEW YORK

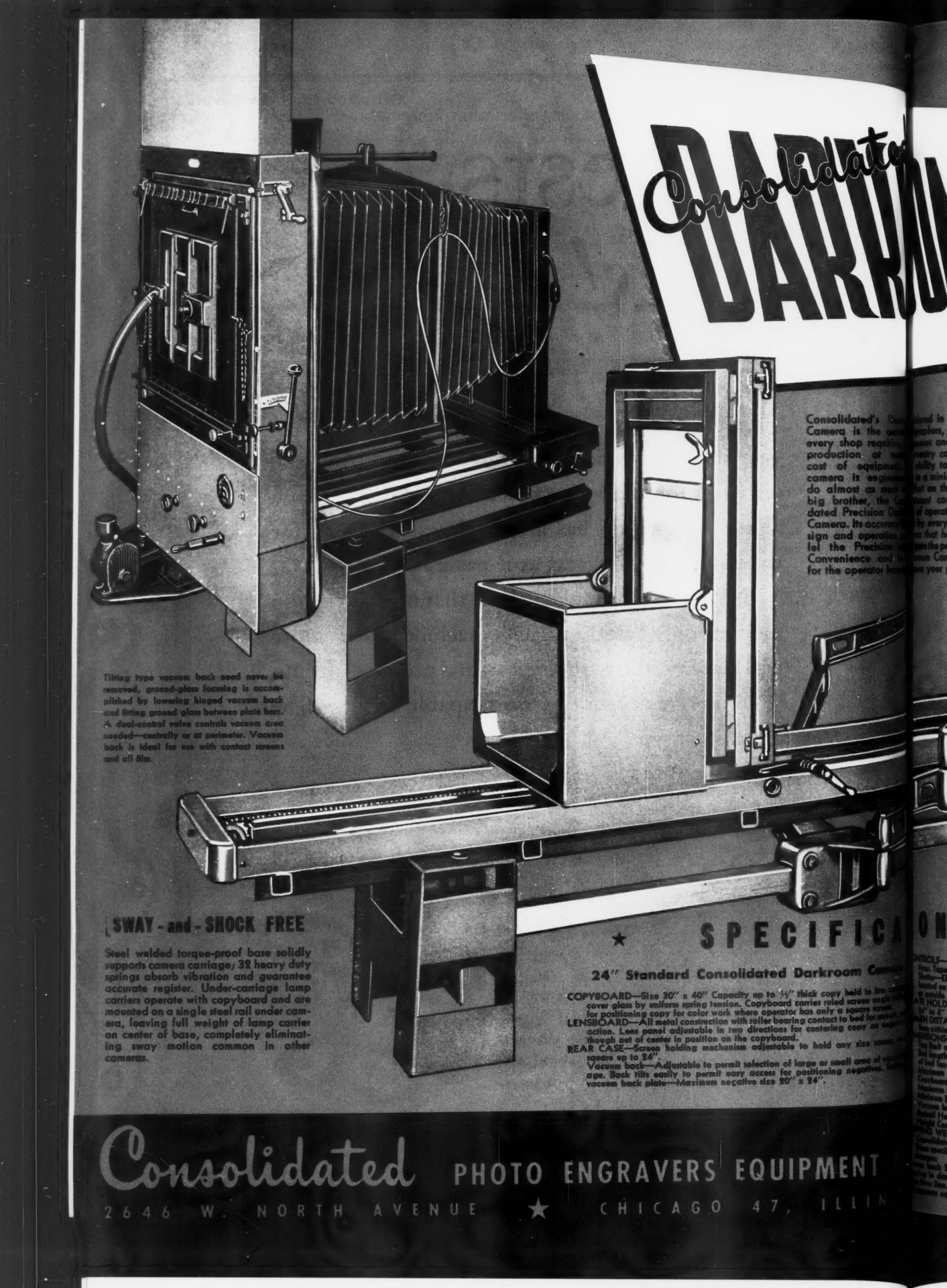
New York City · Boston · Chicago · New Orleans · San Francisco
Los Angeles · Canadian Linotype, Limited, Toronto

LINOTYPE

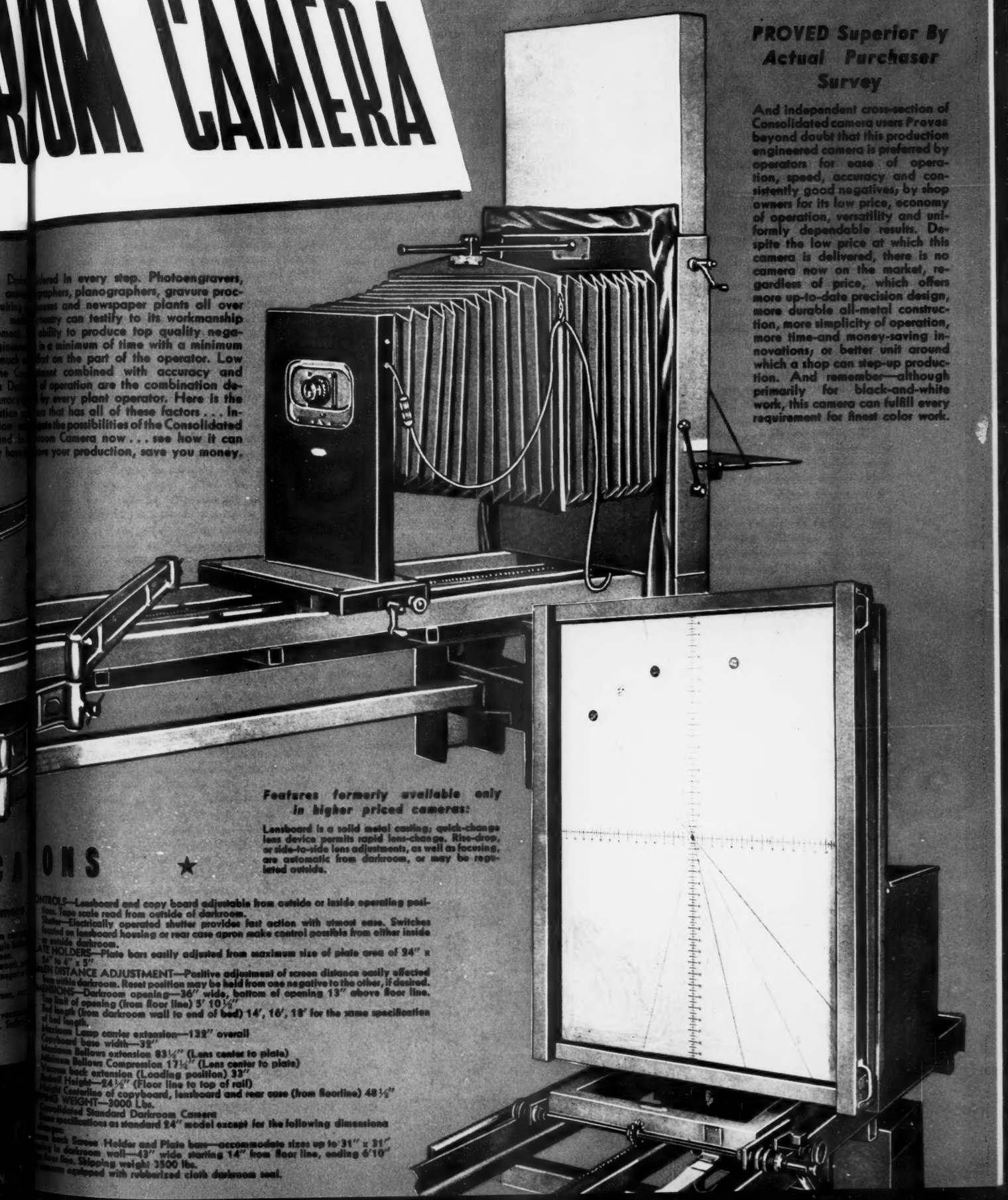
Linotype Caslon Old Face and Garamond Bold No. 3



SIX-MOLD DISK—Linotype's way of increasing available molds by fifty per-cent. This means fewer liner changes, faster production. One of several optional aids available to Linotype users.


Consolidated
DARKRO
Consolidated's
Camera is the
every shop requiring
production at
cost of equipment.
camera is engineer
do almost as much
big brother, the
dated Precision
Camera. Its accuracy
sign and operation
lel the Precision
Convenience and
for the operator have
Tilting type vacuum back need never be removed, ground-glass focusing is accomplished by lowering hinged vacuum back and fitting ground glass between plate bars. A dual-control valve controls vacuum area needed—centrally or at perimeter. Vacuum back is ideal for use with contact screens and all film.
SWAY - and - SHOCK FREE
Steel welded torque-proof base solidly supports camera carriage; 32 heavy duty springs absorb vibration and guarantee accurate register. Under-carriage lamp carriers operate with copyboard and are mounted on a single steel rail under camera, leaving full weight of lamp carrier on center of base, completely eliminating sway motion common in other cameras.
★ SPECIFICA
24" Standard Consolidated Darkroom Camera
COPYBOARD—Size 30" x 40" Capacity up to ½" thick copy held in firm
cover glass by uniform spring tension. Copyboard carries ruled screen angle
for positioning copy for color work where operator has only a square screen.
LENSBOARD—All metal construction with roller bearing contact to bed for smooth
action. Lens panel adjustable in two directions for centering copy on negative
though out of center in position on the copyboard.
REAR CASE—Screen holding mechanism adjustable to hold any size screen
square up to 24".
Vacuum back—Adjustable to permit selection of large or small area of
age. Back tilts easily to permit easy access for positioning negatives.
vacuum back plate—Maximum negative size 20" x 24".
Consolidated PHOTO ENGRAVERS EQUIPMENT
2646 W. NORTH AVENUE ★ CHICAGO 47, ILLIN

...OM CAMERA



...ered in every step. Photoengravers, ...graphers, planographers, gravure proc... ...esses and newspaper plants all over ...country can testify to its workmanship ...ability to produce top quality nega... ...a minimum of time with a minimum ...ort on the part of the operator. Low ...ment combined with accuracy and ...of operation are the combination de... ...by every plant operator. Here is the ...a that has all of these factors . . . In... ...the possibilities of the Consolidated ...oom Camera now . . . see how it can ...ve your production, save you money.

PROVED Superior By Actual Purchaser Survey

And independent cross-section of Consolidated camera users Proves beyond doubt that this production engineered camera is preferred by operators for ease of operation, speed, accuracy and consistently good negatives; by shop owners for its low price, economy of operation, versatility and uniformly dependable results. Despite the low price at which this camera is delivered, there is no camera now on the market, regardless of price, which offers more up-to-date precision design, more durable all-metal construction, more simplicity of operation, more time-and money-saving innovations; or better unit around which a shop can step-up production. And remember—although primarily for black-and-white work, this camera can fulfill every requirement for finest color work.

Features formerly available only in higher priced cameras:

Lensboard is a solid metal casting; quick-change lens device permits rapid lens-change. Rise-drop, or side-to-side lens adjustments, as well as focusing, are automatic from darkroom, or may be regulated outside.

...ONS ★

...NTROLS—Lensboard and copy board adjustable from outside or inside operating positions. Tape scale read from outside of darkroom.
...Shutter—Electrically operated shutter provides fast action with utmost ease. Switches located on lensboard housing or rear case apron make control possible from either inside or outside darkroom.
...ATE HOLDERS—Plate bars easily adjusted from maximum size of plate area of 24" x 24" to 4" x 5"
...EEN DISTANCE ADJUSTMENT—Positive adjustment of screen distance easily effected from within darkroom. Reset position may be held from one negative to the other, if desired.
...ENSIONS—Darkroom opening—36" wide, bottom of opening 13" above floor line. Top limit of opening (from floor line) 5' 10½"
Bed length (from darkroom wall to end of bed) 14', 16', 18' for the same specification of bed length.
Maximum Lamp carrier extension—132" overall
Copyboard base width—32"
Maximum Bellows extension 83¼" (Lens center to plate)
Minimum Bellows Compression 17¼" (Lens center to plate)
Vacuum back extension (Loading position) 33"
Rail Height—24½" (Floor line to top of rail)
Height Centerline of copyboard, lensboard and rear case (from floorline) 48½"
...NG WEIGHT—3000 Lbs.
Consolidated Standard Darkroom Camera
...ame specifications as standard 24" model except for the following dimensions
...mpact:
...om back Screen Holder and Plate bars—accommodate sizes up to 31" x 31"
...ding in darkroom wall—43" wide starting 14" from floor line, ending 6'10" ...m floor line. Shipping weight 3500 lbs.
...mmers enclosed with rubberized cloth darkroom seal.

Testify Paper Shortage Calls for Long-Range Planning

THE paper situation presents "a picture of inadequate supply and apparently inadequate preparation to meet the future demand," it was stated by James F. Newcomb, president of Printing Industry of America, Inc., national trade association of the commercial printing industry, in testimony presented before the House Committee on Newsprint and Paper Supply, Washington, D. C., in hearings held on May 7.

"For the immediate problem," Mr. Newcomb said, "all I can urge upon the Committee is that it take some steps, in cooperation with the paper industry to correct the deficiencies and dislocations in distribution. We recognize that you probably have no weapon except moral suasion. We are not interested in a legislative approach.

"We are concerned," Mr. Newcomb said, "with the apparent failure, at least so far as publicly expressed, of the paper industry to plan expansion beyond a year and a half. All in all, the paper industry seems to have taken a rather too pessimistic view of its future prospects, and this is bound to be undesirable in achieving a balance of supply and demand and restoring more orderly grade and price relationships.

"In other words, the views of the consumer and the producer of paper are diametrically opposed, and we hope that this Congressional body will find a means to reconcile them."

Mr. Newcomb pointed out that despite the fact that the paper industry has been doing "a splendid job" in increasing production, the industry "regularly tends, probably out of honest enthusiasms, to be over-optimistic about supplies."

Commercial printers have been suffering not only from the over-all shortage of paper, Mr. Newcomb pointed out, but also from other complicating factors in the paper supply situation. He introduced John J. Maher of the Maher Printing Co., Chicago, another witness for the commercial printers, who presented results of a nationwide survey of PIA member firms.

The survey showed that book papers are in shortest supply—a fact which indicates that "the distribution system of the paper industry is seriously dislocated," Mr. Maher said. The distortion of grade relationships which results from shortages of certain grades of paper forces commercial printers to produce printing of a less economical and functional type than they desire to produce. And this in turn leads to a false impression that printers have raised their prices out of line with the price level of the general economy, he explained.

"Practically all our printers reported that they are limited in some way by a so-called quota system applied by both mills and merchants. Apparently this quota system is flexible, perhaps based on rule-of-thumb, certainly not on any recognized system, and is not applied across the board, or in the same way to all customers."

The survey also showed a very spotty situation as regards quality of paper now being delivered to commercial printers, Mr. Maher reported. Although no evidence was uncovered by the survey of a so-called black market in paper, "a few centers reported black markets in specialty items and also that small publishers have been forced to pay exorbitant prices on paper they purchase and supply to printers."

Walter F. McArdle of the McArdle Printing Co., Washington, D. C. the third witness for Printing Industry of America, discussed some of the causes for the shortage.

"Even if the goals set for new pulp production and imports are achieved," he said, "we still will not have solved the problem for commercial printers." Printers would still be hit by the continuing shortage of market pulp, which is required by mills having no pulp converting facilities of their own. Such mills are, as it happens, the ones which to a large extent supply the commercial printers, he pointed out.

Mergers of paper mills have had an adverse effect upon the free flow of paper supplies, Mr. McArdle pointed out. "Where mills were acquired by publishers or other large users of paper, the mergers have tended to take off the market entirely and divert to the owners' own use large amounts of paper formerly sold to job printers and other users.

And mergers of small mills with larger have resulted in a tendency to channel the available supplies of paper to certain steady customers on a contract basis, thus lessening the free supplies of paper available for spot markets in various paper grades, he said.

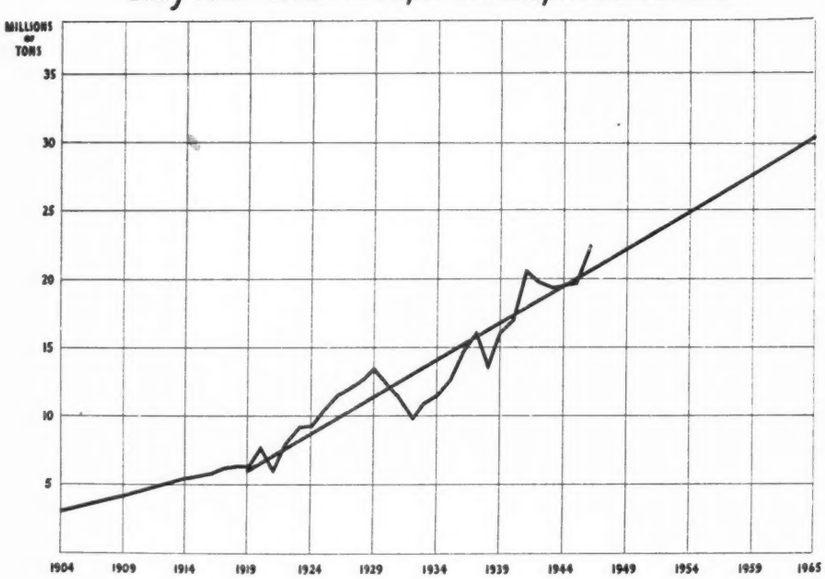
Mr. McArdle produced statistics to show that the percentage of so-called "vertical mergers"—mergers to secure raw materials—was greater for the paper and allied industries than for all of industry combined during the years 1940-46.

"In the publishing field," he said, "most of the acquisitions doubtless represent an attempt by magazine publishers to assure their source of paper by the purchase of mills. Such acquisitions should not be thought of simply a reshuffling of paper sources since acquisitions of mills or mill supplies on this scale enables one purchaser to benefit in a sellers market and vastly increase circulation, while others, dependent on the free market, may not have been in a position to do so."

Mr. Newcomb, summing up for the commercial printers, pointed out that new sources of pulp supply must be uncovered to improve the long-range situation. "There is considerable evidence that unless a constructive long-range forest policy and a new pulp procurement policy are developed, all major users of paper will be forced to suffer serious consequences."

"We in the commercial printing industry are not pleading poverty. But paper, involving as it does more than one-third of our cost of doing business, is a fundamental issue. Unless the paper supply problem can be solved, unless we have an adequate and assured supply of paper, we can have no real confidence in our ability to expand and prosper as an industry."

Long Term Trend in Paper Consumption in the U.S.



Moves Plant

The Tesch Mfg. Co. has moved its plant and office from Milwaukee, Wis., to 1220 W. Wisconsin Ave., Appleton, Wis., it was announced by W. C. Tesch recently. The new building is one-story cement block, 38 ft. by 75 ft. The company manufactures saw filers and swagers.

Here's what you need for CLEANER impressions with LESS wear....

TINGUE

TRADE MARK

PRINTING PRESS BLANKETS

TINGUE Drawsheets and Printing Blanket

TOP

This drawsheet is firm, durable, economical and long-lived.

IMPROVED SATISFACTION

Coated with "Calvaprene" by du Pont, on a fabric which has been impregnated with "Neoprene."

GOLD TYMPAN CLOTH

An old favorite for Flat Bed Presses. Skivered metallic surface accepts excess ink and flakes it off without smudging.

COMBINO

A synthetic, laminated top blanket, extremely durable and a clean printer.

TINGUE Underblanket Press Packing

CUSHION CORK BLANKETS*

Highly resilient and recommended as the underpacking for "Combino" and Tingue coated Felt or in combination with "Foundation" Blanket or "Korker" where a drawsheet is used.

KORKER *

This new Tingue printing press blanket is the result of years of experience and research in the construction of blankets and drawsheets.

FOUNDATION BLANKET *

A firm durable oilproof underpacking laminated by du Pont with "Neoprene" for use in combination with "Cushion Cork", "Korker" and Tingue Drawsheets or Felt.

WOOL FELT BLANKETS

Coated and uncoated, available in your gauge and size.

*Reg. U. S, Patent Office

TINGUE BROWN AND COMPANY

114-120 EAST 23rd STREET, NEW YORK 10, N. Y.
1227 WABASH AVENUE, CHICAGO 5, ILLINOIS
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CANADIAN SALES AGENTS
ROSS WHITEHEAD & CO., LTD.
MONTREAL, CANADA

BOOKS

RECEIVED

Type—for Books and Advertising

TYPE for Books and Advertising is a practical working manual and a source of inspiration to all those dealing with the use of type and layout. It appears that the book not only is a source of reference material for the chap who is not exactly familiar with the fundamentals of type usage, but it also will be useful to the printing executive who must know something about type, type design and type usage.

The first chapter is entitled *The Tools of the Typographer*. In it are explained the square-inch and the line method of computing type areas from copy; tools used by the typographer and other fundamental information. Next are explained the methods used in casting and setting the four kinds of type — Keyboard-composed and slug-cast; hand-composed and slug-cast; hand-composed, and single-type composed.

Next follows an analysis of *Type Families and Their Cousins and Their Aunts*. *Typographic Niceties* presents information about letter spacing, space between paragraphs, type lengths or measures, widows and orphans and many other details. There is a separate section in which much information with illustrations is devoted to recognizing typefaces.

Making Type Layouts, as the title implies, shows through illustrations and descriptive text, the mechanics of making type layouts.

In Chapter 7, entitled *Period Typography*, are shown examples of 15th, 16th, 17th, 18th and 19th century typography. Being grouped in sequence for comparative purposes, this chapter should be one of the most interesting of the entire book to anyone wanting to distinguish type transition and layout.

The Chapter, *Masters of Typography in the 20th Century*, consists of biographical "sketchlets", together with portraits and specimens of the principal type faces designed by present-day type authorities. Among them are Updike, Goudy, Rogers, Cleland, Bernhard, Ruzicks, Gill, Koch, Middleton, Dwiggins, Chappell and Blumenthal.

Chapter 9 is extremely interesting. It contains examples of what twenty type men consider their best and most challenging type pages. The examples are presented in miniature with explanatory remarks accompanying each.

Chapter 10 is devoted to an illustration and explanation of *Modern Typography*. We will leave our readers judge the merits of this chapter. It seems that the word modern as used in this section means a breakaway from traditional forms.

A Glossary containing definitions of the more common printing terms winds up the text matter.

Type for Books and Advertising—By Eugene M. Ettenberg. Bound in red blind-stamped cloth with black-and-gold backbone label. Size, 8¾ in. by 12¼ in., 160 pages. Many illustrations. Published 1947 by D. Van Nostrand Co., Inc., 250 Fourth Ave., New York 3, N. Y. Price $6 per copy. Order direct from the publishing firm.

Touch System for Operators

EDWIN B. HARDING has revised the book *A Practical Touch System for Line Casting Machines*. The course is based on the ten-finger touch system developed by Harding during 25 years of teaching at South Dakota State College. This course furnishes hand copy the student can follow. The copy has been arranged to avoid overset lines and develop gradually into the more difficult work.

The book deals entirely with elementary keyboard operation and routine machine maintenance. Knowledge essential to the operation of the machine only is presented.

The book is the result of what has proved most effective in training students to become efficient machine operators. It is made up in pamphlet form (13 in all) and boxed. The pamphlets are an advantage to the student as the lesson desired may be placed on the machine copyboard.

A Practical Touch System for Line-Casting Machines—By Edwin B. Harding. Size 6 in. by 9 in.; 13 pamphlets, boxed; 176 pages; price, $4. May be ordered from Edwin B. Harding, c-o South Dakota State College, Brookings, S. D.

Conference Dates

(with organization names and principal officers.)

ANPA Mechanical Conference—J. L. Stackhouse, Chairman, Easton (Pa.) *Express;* Walter E. Wines, Manager, ANPA Mechanical Dept., 370 Lexington Ave., New York 17, N. Y.

Great Lakes Newspaper Mechanical Conference — Pantlind Hotel, Grand Rapids, Mich., Oct. 26, 27, 28. President Deo A. Padgett, Composing Room Supt., Cleveland *Plain Dealer;* Secretary Al. P. Oberg, Composing Room Supt., Flint (Mich.) *Journal.*

International Association of Printing House Craftsmen — Grand Union Hotel, Saratoga Springs, N. Y., Aug. 31, Sept. 1, 2, 3. Wm. H. Griffin, President, Griffin Bros., 447 Sansome St., San Francisco, Calif.; Secretary, Pearl E. Oldt, 702 Griswold St., S. E., Grand Rapids 2, Mich.

International Trade Composition Association — Book - Cadillac Hotel, Detroit, Mich., Aug. 28, 29, 30. Frank M. Sherman, Executive-Secretary, 1015 Chestnut St., Philadelphia 7, Pa.

Iowa Daily Newspaper Mechanical Conference—President A. H. Schmeichel, Composing Room Supt., Muscatine (Ia.) *Journal*; Secretary Paul Kamler, Composing Room Supt., Clinton (Ia.) *Herald.*

Lithographers National Association—W. Floyd Maxwell, Executive Director, 420 Lexington Ave., New York 17, N. Y.

National Association of Photo Lithographers — Book - Cadillac Hotel, Detroit, Mich., Oct. 22, 23, 24 and 25. Walter Soderstrom, Executive Secretary, 1776 Broadway, New York 19, N. Y.

National Graphic Arts Education Association — Hotel Morrison Chicago, Ill., June 16, 17 and 18. Byron G. Culver, president; Fred J. Hartman, educational director, 719 Fifteenth St., N. W., Washington 5, D. C.

New England Mechanical Conference—Hotel Statler, Boston, Mass., Nov. 8 and 9, 1947. President, Wm. F. Madden, Composing Room Supt., Worcester, (Mass.) *Telegram-Gazette.* Walter C. Crighton, Secretary-Treasurer, New London (Conn.) *Day.*

Northwest Mechanical Conference — President Charles N. Bertram, Pressroom Supt., St. Paul (Minn.) *Dispatch and Pioneer Press.* Vernon Eck, Secretary, 3725 48th Ave. S., Minneapolis 6, Minn.

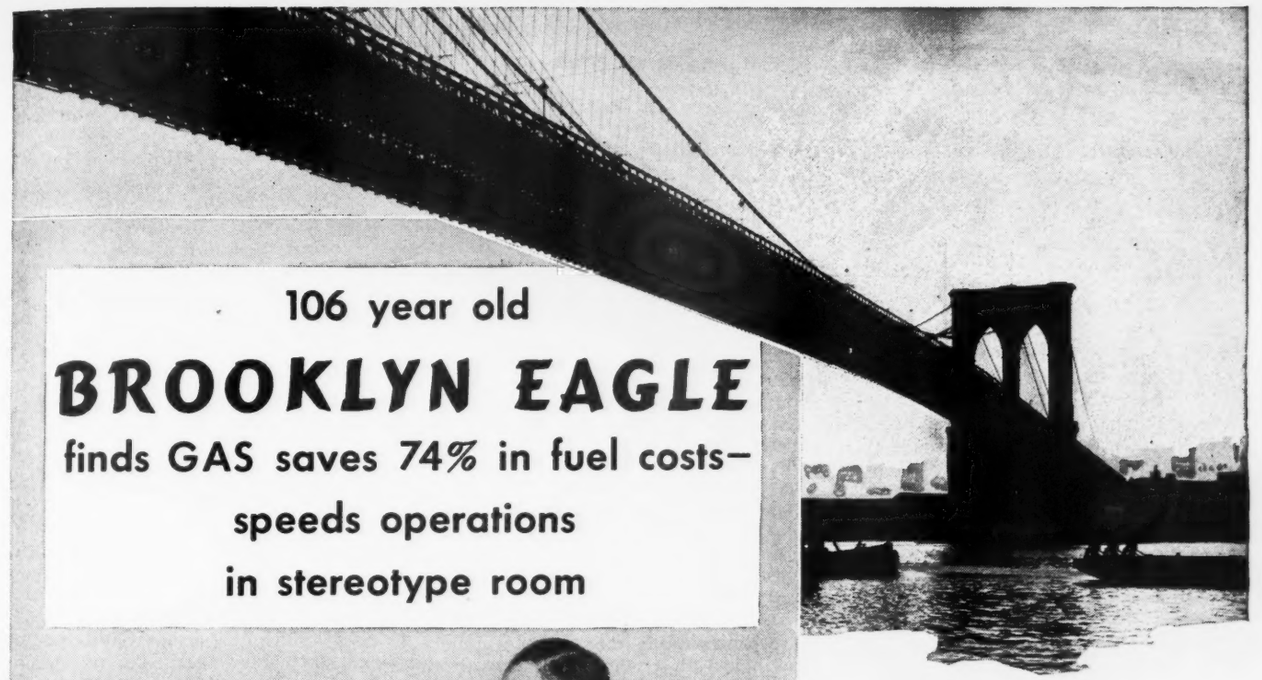
Pacific Newspaper Mechanical Conference — 1948 meeting to be held in San Francisco. President J. W. Fitzsimmons, San Francisco (Calif.) *Call-Bulletin;* Secretary for the North, Edw. N. Conley, San Francisco *Chronicle;* Secretary for the South, Fred J. Moyer, Los Angeles, *Daily News.*

PNPA Mechanical Conference — William N. Hardy, Manager, PNPA, 209-213 Telegraph Bldg., Harrisburg, Penna.

Printing Industry of America — French Lick Springs Hotel, French Lick, Ind. Sept. 22, 23, 24 and 25. James R. Brackett, General Manager, 719 Fifteenth St., N. W., Washington, D. C.

SNPA (Eastern Div.) Mechanical Conference—Walter C. Johnson, Manager SNPA, P. O. Box 1569, Chattanooga 1, Tenn. Chairman Executive Committee, I. J. Gardner, jr., Composing Room Supt., Chattanooga (Tenn.) *Times.*

SNPA (Western Division) Mechanical Conference — February 18, 1948. Location to be selected later. Chairman, W. F. Thompson, Austin (Tex.) *American-Statesman.* Secretary, C. W. Tabb, 723 Texas Bank Bldg., Dallas, Tex.



106 year old

BROOKLYN EAGLE

finds GAS saves 74% in fuel costs—
speeds operations
in stereotype room

The Brooklyn Eagle, 106 years old this year and numbering such famous men as Walt Whitman in its long line of editors, is thoroughly modern in its choice of fuel and equipment for stereotype operations. Recently *The Eagle* switched from another source of heat to Gas with excellent results.

With Gas, a saving of 74% in fuel costs is now achieved over the previous source of heat.

This story of the greater economy and speed of Gas, plus other inherent advantages is heard in countless installations in business and industrial establishments all over the country. Why not ask the Industrial Engineer of your local Gas Company to tell you how you can enjoy these benefits of Gas and modern Gas equipment.

AMERICAN GAS ASSOCIATION
420 LEXINGTON AVENUE, NEW YORK 17, N. Y.

MORE AND MORE...
THE TREND IS TO GAS
FOR ALL
INDUSTRIAL HEATING

Future *of r.o.p. newspaper color advertising appraised — Obstacles under competitive pressure which must be overcome — Color is inevitable — Rotogravure enters the picture when presses can be secured*

MANY newspaper production and mechanical executives are conscious of the difficulties in introducing r.o.p. color printing in the daily newspaper. Tide, *in its March 21 issue, printed an appraisal of the situation which we feel is most complete. This article (reprinted by permission of the editor) appears below:*

TODAY, the trend is clear as a rainbow. Advertisers are putting more and more of their appropriations into color, or into "color media"—magazines, outdoor, carcards, and the like. And the more progressive newspaper publishers have stopped resisting; today they recognize that newspapers positively must develop ways to print color advertising, at the speed of their regular press runs and at a quality comparable to that delivered by the magazines.

Before the war the newspapers were slow to climb on the bandwagon and during the war it was impossible. It is still difficult because color printing means paper wastage and few newspapers have paper to waste, or even to use liberally. But the time will come when that argument won't hold. By then the newspapers must be technologically prepared to swing into color operations quickly. They are far from that point today.

Only about 22% of the 1,700-odd U.S. dailies offer r.o.p. color advertising (*i.e.*, "run-of-paper" in their regular news sections); and few of these are large circulation metropolitan dailies. National advertisers shy away from newspaper color for two major reasons: limited facilities make campaigns geographically spotty; and the absence of uniform rates and standards makes planning difficult and costly.

The most consistent users of r.o.p. color to date are local retailers and regional distributors of food products, oil and gasoline. Some notable exceptions on the national level are: Schenley Distributors, Brown-Forman Distillers, Continental Oil, several Standard Oil companies, Pillsbury Mills, Brown & Williamson Tobacco (for Kools) and Sears, Roebuck.

Color History

Editorial color was first used in the 1890's as a circulation builder. Its use was spotty and largely experimental until the technical improvements of World War I gave the technique a much-needed boost. Costs remained high, however, and the low advertising budgets of the depression limited its use. Still such pioneers as the Indianapolis *Times*, the Chicago *Tribune* and the Milwaukee *Journal* all made important strides. In 1936 the *Tribune* sponsored an industry-wide color conference and in 1937 the American Newspaper Publishers Assoc. attempted to standardize color inks.

The Scripps-Howard Newspapers last year compiled a list of 398 U.S. dailies accepting run-of-paper color advertising (at least one color in addition to black). Of these, only 156 take three colors (including black) and only 86 publish four-color ads. But the number is growing and the U.S. and Canadian dailies have ordered an estimated $100 million worth of new machinery. It will be slow coming, of course, which will delay the progress as the current newsprint shortage now is doing.

When newsprint supplies ease up, some attempt will probably be made to

(*Continued on Page 85*)

The ART and TECHNIQUE of PHOTO-ENGRAVING

By Julien J. Subiran

This little 88 page book, well illustrated, is bound in stiff board covers. Many illustrations. In the text is explained the steps necessary to the production of photo-engravings. Intended for the buyer and user of photo-engravings. Not a technical treatise. Different kinds of engravings explained, including surprinting, copy preparation, color proofing, benday values and tonal chart. Also given is a complete glossary.

Price, $1.50 per copy. Please send remittance with order to

Printing Equipment Engineer

1276 West Third St., Cleveland 13, Ohio

Photography and Platemaking for Photo-Lithography

by I. H. Sayre

This is both an instruction book and an encyclopedia for offset-lith platemakers. Text in the book serves both as an instruction book for the beginner and as a reference book for the experienced platemaker. This revised edition contains new techniques, procedures and discoveries of methods. A new section on color process platemaking techniques has been Added. Albumin and deep-etched platemaking techniques explained carefully. Every phase of offset-lith platemaking included.

Price $6 per copy

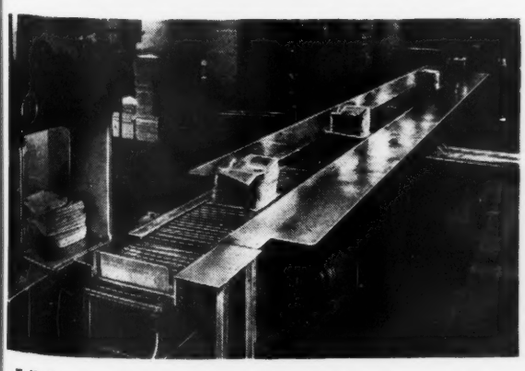
May be ordered through Printing Equipment Engineer. Because of narrow handling margin, please enclose cash with order.

PRINTING EQUIPMENT ENGINEER
1276 West Third St. Cleveland 13, Ohio

A NEW JAMPOL INSTALLATION

The second Feeder and Control Mechanism, recently installed, now makes it possible to double tie up to 11-12 bundles per minute.

. . . Assures speed and efficiency in mailroom of THE MILWAUKEE JOURNAL



Full length of the Jampol Feeder Conveyors as installed in mailroom of THE MILWAUKEE JOURNAL.

One of three units developed for THE MILWAUKEE JOURNAL and installed in August, 1946. As shown in the photograph, each unit is made up of the JAMPOL Feeder Conveyor, THE JOURNAL Feed and Control Mechanism and the SIGNODE Wire Tying Machine.

This unit receives loose stacks of newspapers placed on conveyor by a mailer. It conveys, automatically ties the loose stacks of newspapers with top and bottom wrapper, then automatically ejects the finished bundles into chute leading to loading platform. This operation is accomplished at the rate of up to 22-24 single tied bundles per minute. Complete installation calls for 4 units.

● *Many years experience of Jampol Engineers in handling newsprint, stereotype plates and mailroom products has made it possible to render valuable services to publishers, architects and engineers in the planning of new buildings and in expansion of present facilities. We will gladly discuss your problems if you will write to us.*

the
JAMPOL
COMPANY, INC.
GENERAL OFFICES AND FACTORY:
728-742 61st St., Brooklyn 20, N. Y.
CANADIAN FACTORY: Sherbrooke, Quebec

EXECUTIVE ¶s

John C. Yetter, 83, superintendent of the Chicago *Tribune* ink plant and an authority on engraving, ink, and press work, died April 24. He joined the *Tribune* staff on Nov. 15, 1899, and at the time of his death was the third oldest working employe of the organization. Mr. Yetter was instrumental in bringing about the printing of color rotogravure and was responsible for making the *Tribune* ink plant one of the finest of its kind in the world. He came to the *Tribune* when it bought a color press to print comics. In 1918 Mr. Yetter, who was then superintendent of the roto pressroom, suggested that color be applied to roto printing. He helped design a press upon which a continuous web of paper could be printed in multiple color. Two years later, an experimental print was made of two young girls, each holding a bouquet of roses and on April 9, 1922, the *Tribune's* first color roto section appeared. When the *Tribune* decided to manufacture its own ink in 1924, Mr. Yetter turned his talents to that field and was named superintendent of the ink plant. His department produces more than 100 tons of ink each month for comics, roto, color roto and newsprint color printing. Mr. Yetter was known for his creative genius. Never satisfied, he constantly was experimenting on new ideas, both at work and in his laboratory at home. He became an expert in chemistry and held a number of patents on color printing in roto. A son, Louis, is employed in the *Tribune* ink plant and another son, Frank, is in charge of rotogravure and production on the St. Louis *Post-Dispatch*.

The Dayton (O.) *Daily News* has announced appointment of Harry A. Miller as mechanical superintendent. Miller

Harry A. Miller, Mechanical Superintendent of the Dayton (O.) *Daily News*.

was a candidate for the presidency of the International Typographical Union in 1944. He will be in charge of the composing room, engraving and stereotyping departments and the press room. He has been associated with the *News* since starting his apprenticeship in 1910, except for a brief period during World War I and from 1942 until 1944 when he served as president of the Dayton Typographical Union 57. Prior to his recent promotion Miller was foreman of the *News* composing room. He is succeeded in that capacity by Edward L. Reich who also entered the trade at the *News* as an apprentice in 1929.

Appointment of Clarence Keller as pressroom foreman has been announced by the St. Louis (Mo.) *Post-Dispatch*.

Pressroom Superintendent of the St. Louis *Post-Dispatch*, Clarence Keller.

Keller, an assistant foreman in charge of the paper's rotogravure pressroom, took up his duties April 26. He succeeds George Kroner, retired.

(*Continued on Page 85*)

NO. 4 VANDERCOOK PROOF PRESS
Widely used by printers and typesetters for proving plates or forms up to 14" x 18", as well as for laboratory use by ink and paper manufacturers. Important features include (1) power ink distribution, (2) changeable inking units, (3) micrometer front sheet guides, and (4) foot operated and automatic grippers.
VANDERCOOK
PREMAKEREADY EQUIPMENT
VANDERCOOK & SONS, INC.
General Offices
914 N. Kilpatrick Avenue
Chicago 51, Ill.
SPECIFICATIONS
Bed Size . . . . . 15" x 25"
Maximum Sheet . 14¾" x 20"
Maximum Form . . . 14" x 18"
Floor Space . . . . 2'2" x 6'6"
Mail Coupon Now
Send full information on No. 4 Vandercook.
Send catalog of all Vandercook Proof Presses.
INDIVIDUAL
FIRM
ADDRESS
CITY ZONE STATE

Patents

For The Graphic Arts Field

Covering patents issued April 1, April 8, April 15, April 22, April 29.

All new patents for the Graphic Arts are reported exclusively for Printing Equipment Engineer by Invention, Inc., an industrial patent research organization in Washington, D. C. Invention, Inc., presently has the only staff in the country that examines, in the U. S. Patent Office, the complete printed copy, drawing by drawing and page by page, every one of the several hundred new patents issuing each week. Printing Equipment Engineer is the only trade publication in its field offering a report based on this complete coverage. For copies of the patents listed here specify the patent numbers and send 25c for each separate patent, or 10c for each trade mark or design patent (stamps not accepted) to the Commissioner of Patents, Washington, D. C.

Binding, Cutting, Perforating

During the five weeks covered by this report, no patents have been issued for this heading.

Composing Room Equipment

2,419,700. ASSEMBLER FOR LINE CASTING MACHINES facilitates alternate setting up of different characters and transition from one type of characters to another by actuating a single lever without the necessity of manual displacement of matrices. Machine has a fixed matrix assembling rail, a second rail including a plate member, and a slide carried by the plate for longitudinal movement. Second rail is supported for lateral movement between a retracted position and a projected operative position in which the slide is over the first rail. An arm mounted on the plate moves the slide positively into matrix receiving position against the pull of a spring which tends to retain the slide in inoperative position. Invented by Einar Erik Alm, Stockholm, Sweden. Unassigned. Application January 5, 1944. In Sweden February 5, 1941. 6 claims.

Feeding, Folding and Delivery

2,419,403. TRIPPING CONTROL FOR MULTICOLOR PRESSES will trip the printing cylinders whenever a sheet is presented out of register. Tripping device automatically acts to move cooperating printing components away from each other whenever a sheet is absent or presented out of register, and will subsequently move the components together when normal conditions are restored. When a properly registered sheet is not presented, a detector mechanism is actuated and the tripping bars of each printing unit are raised in succession to trip "off" each of the units. Mechanism remains so during the period when that unit should have been printing a sheet, but each unit is tripped "on" automatically after each such period unless several sheets are presented improperly. Invented by Albert J. Horton, White Plains, N. Y., and William K. Eckhard, Newark, N. J. Assigned to R. Hoe & Co., Inc., New York, N. Y. Application August 9, 1941. 1 claim.

Plate Making

DESIGN 146,546. ORNAMENTAL DESIGN FOR A MATRIX ROLLER, the drawings showing a complete floor-model apparatus. A rectangular base, apparently waist high, has sides that rise above the base arcuately at their centers. A semi-cylindrical hood is held between the arcuate portions of these sides and the matrix roller is within the hood. There is a control wheel at each of opposite sides of the hood, and adjacent each end of the apparatus there is a separate set of three control buttons located at the right hand of the operator. Invented by George R. Steele, Battle Creek, Mich. Assigned to The Duplex Printing Press Co., Battle Creek, Mich. Application May 23, 1946.

Printing Inks and Related Chemicals

2,418,416. AZO LAKES FOR USE AS LAKE PIGMENTS have good resistance to light, heat and water bleeding when used in lithographic inks. Process comprises making a solution of anthranilic acid and 2-naphthol-3,6-disulfonic acid in aqueous hydrochloric acid in which mineral acid is present in sufficient amount to provide a solution having a pH value of 0.2. Sodium nitrite is added until the anthranilic acid is diazotized and an alkali of an alkali metal is added until a coupling medium having a pH value of 7.8 is produced. The alkali salt of the product formed by coupling anthranilic acid and 2-naphthol-3,6-disulfonic acid is allowed to form and then a barium salt of the coupling product is formed by action of a water-soluble, non-oxidizing mineral salt of barium. Invented by Roy

Stirring Action

STIRRING ACTION photos, faithfully reproduced by the skill of engravers and printers, give millions of readers on-the-spot accounts of many important events.

And, it's the stirring action of the electric induction furnace that brings to many engravers the flawess, quick, clean-etching metals they need . . . ZOMO ELECTRIC ZINC, A-Z ALLOY.

In this furnace, the heat is generated directly in the bath itself from a magnetic field surrounding the lining. Results: controlled temperatures . . . controlled textures . . . assured uniformity.

Order both these metals from your regular supplier.

ZOMO ELECTRIC ZINC ◆ A-Z ELECTRIC ALLOY

C. Locke, Salem, N. J. Assigned to E. I. du Pont de Nemours & Co., Wilmington, Del. Application December 30, 1943. 6 claims.

2,418,583. ETHYL CELLULOSE GELS prepared by this process are useful in printing inks and as coatings for paper and the like. A mass of methyl abietate is heated between 140° F. and 600° F. and is then agitated in the presence of a free oxygen containing gas until the viscosity of the mass at 25° C. has increased by at least 50%. The ethoxy content of the ethyl cellulose is between about 44% and 50%. Invented by Mortimer T. Harvey, South Orange, N. J. Assigned to Harvel Research Corp., a corporation of New Jersey. Application August 26, 1944. 4 claims.

2,419,932. ARYLIDES OF ORTHO-HYDROXY CARBOXYLIC ACID are useful as coupling compounds in the production of azo dyes of the direct-developed type and are distinguished from analogous arylides by a reduced substantivity, making them valuable for printing purposes. The process of preparing the product comprises condensing ortho-hydroxy carboxylic acid or its sodium salt in equimolecular proportions with the morpholine of substituted aromatic amine in an inert solvent such as toluene, xylene, chlorobenzene, etc., with the aid of phosphorous trichloride. Invented by Harry Wilhelm Grimmel, Easton, and Alfred Guenther, Riegelsville, Pa. Assigned to General Aniline & Film Corp., New York, N. Y. Application October 19, 1944. 9 claims.

Printing Presses and Equipment

Reissue 22,869, of 2,224,391. APPARATUS FOR ELECTRONIC PRINTING may be used to print, with or without pressure, on any suitable material, such as paper or textile, and from any practical printing surface produced in relief, gravure, or planographic, on a plate or cylinder in a single or multi-color press. The printing is effected by subjecting the printing ink to electromagnetic and or electrostatic lines of force. This is accomplished by mounting electromagnets within a hollow impression drum which attract printing inks carrying metallic substances subject to the influence of magnetic lines of force from the drum. In case the inks do not carry such metallic particles, electrostatically induced lines of force would be used in transference of the ink. The original patent of this reissue was granted December 10, 1940, and was reported in the January 1941 *Printing Equipment Engineer*. Invented by William C. Huebner, New York, N. Y. Unassigned Application for reissue April 17, 1945. 21 claims.

2,419,694 and 2,419,695. METHOD OF STENCILLING PILE FABRICS BY SUCTION produces pile fabrics having a figured pile in which the tuft yarns are colored by a printing operation and the coloring matter is caused to penetrate the pile so that the entire exposed length of each tuft is colored. During the printing operation, a stencil sheet is brought into light contact with the tips of the tufts and simultaneously, the coloring matter is forced through the sheet from the rear and suction is applied to the back of the fabric. By thus forcing the coloring matter through the stencil sheet, while the latter engages the pile so lightly as not to distort the tufts, and at the same time applying suction at the rear surface of the fabric, the full length of each tuft is colored and the colored edges have sharp edges without blurring. The machine for effecting the method disclosed in the preceding companion patent includes a perforated rotary drum having a stencil sheet wrapped about it, the drum being adapted to contain a body of coloring matter some of which is forced through the lowest part of the sheet as the drum rotates. The fabric is moved over the horizontal top of a table over which the drum is supported. A suction chamber extends into an opening through the top of the table, the chamber terminating in the plane of the table, and lying in vertical alignment with the axis of the drum. Movement of the fabric is effected by a pair of transverse spiked rolls rotated at the same surface speed as the drum. Invented by Howard L. Shuttleworth, Amsterdam, and Garfield J. Underwood and Lewis R. Jones, Broadalbin, N. Y. Assigned to Mohawk Carpet Mills, Inc. Original application October 26, 1944. Divided and application for second patent October 18, 1945. 1 and 3 claims, respectively.

IN 35 SECONDS a Rouse Band Saw cuts a full galley of slugs **to variable measure**—automatically, accurately. No gauge setting is required—no clamping—no measuring! Slugs feed mechanically **at uniform speed.**

Teamed up with a type-setting machine, a Rouse Band Saw does the work of hours in minutes. It cuts slug-lines for all types of composition that require frequent changes of line measure.

MITERING MACHINES
COMPOSING STICKS
SLUG CLIPPERS
BAND SAWS
LEAD AND RULE CUTTERS
TYPE GAUGES

Write today for illustrated folder on this and other Rouse time-saving printers' equipment.

H. B. ROUSE & COMPANY
2214 North Wayne Avenue
Chicago 14, Illinois

For greater accuracy—specify Rouse Composing Sticks. An investment in Rouse equipment pays a handsome profit.

For Patent Research in the U. S. Patent Office, or a prompt estimate on any type of search, address INVENTION, INC., Munsey Bldg., Washington, D. C.

Executive ¶s

(Continued from page 82)

Frederic William Goudy passed away recently at his home in Marlboro, N. Y. Mr. Goudy was famed throughout the printing and publishing industry for his designs of type faces. During his career he created more than 100 type faces. He is survived by a son, Frederic T. Goudy.

Stanley J. Kent has been appointed sales manager of the Sleight Metallic

Sales Manager of Sleight Metallic Ink Co. of Ill., Edward J. Kent.

Ink Co. of Illinois, Inc. The announcement was made by Louis W. Hraback, president of the company. Mr. Kent has been in the sales department of the company since 1935. His headquarters are in Chicago.

Byron W. Neher, chemist, has joined the Graphic Arts research staff of Battelle Institute in Columbus, O. Mr. Neher holds Bachelor of Arts and Master of Arts degrees from Indiana University.

In recent personnel changes made by Capper Publications, Inc., Joseph W. Horton was made pressroom superintendent. He was formerly with Kable Brothers in Mount Morris, Ill. Mr. Horton succeeds Ralph J. Ratcliff who retired after 40 years with Capper Publications. Vern O. Williams has been appointed mechanical superintendent of the Topeka Newspaper Printing Co., Inc., which publishes the *Topeka Daily Capital* and the *Topeka State Journal*. He has been composing room superintendent and will continue to perform in that capacity. Mr. Horton has had about 21 years experience in the printing industry. He was supervisor for Kable Brothers for several years and previously had been associated with Cuneo Press and R. R. Donnelly and Sons in Chicago. Mr. Williams has been with the Topeka Newspaper Printing Co. since 1946. He was mechanical superintendent of the *Illinois State Register*, (later consolidated with the *Illinois State Journal*). During the war he was superintendent of maintenance in the Sangamon Ordnance Plant in Illiopolis, Ill.

Newspaper Color

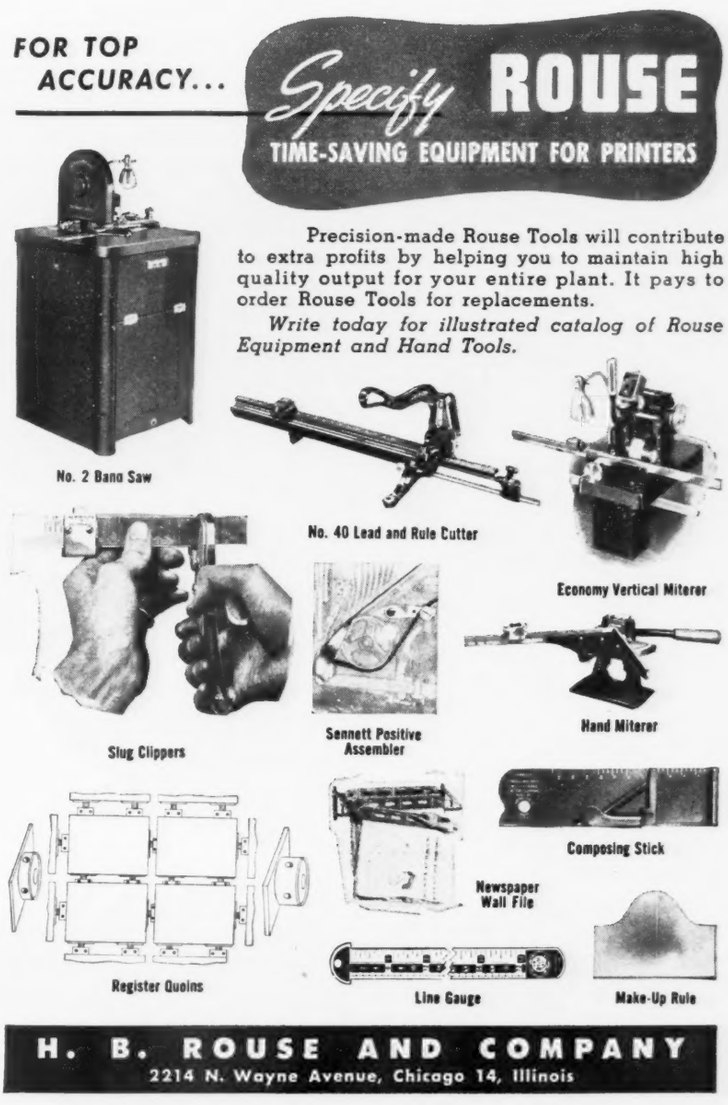
(Continued from page 80)

improve the quality of paper and thus the quality of color reproduction. But even then the mechanical difficulties of the technique will be its biggest trouble.

The two great mechanical problems are in printing color ads at black & white press speeds and in finding quick-drying inks that will print clearly. Newspapers are printed, of course, by the letterpress or relief method from stereotype plates on high speed rotary presses through which continuous rolls of newsprint are fed. The paper must be pressed against a separate cylinder for each color used; variations in hues are obtained by overprinting the basic primary colors.

This ties up a paper's presses badly; but a few multiple-color printing units and color attachments in the form of reversible cylinders are available, and additional decks can be added to the newer type presses without limiting their capacity.

The manufacturers are continuously working to improve the quick-drying inks that have been developed. But the progress on inks leaves plenty to be desired. The extra time required to make color plates and get the presses ready slows the process and limits make-up flexibility. Consequently, advertisers must contract for r.o.p. color space far in


FOR TOP ACCURACY...
Specify ROUSE
TIME-SAVING EQUIPMENT FOR PRINTERS
Precision-made Rouse Tools will contribute to extra profits by helping you to maintain high quality output for your entire plant. It pays to order Rouse Tools for replacements.
Write today for illustrated catalog of Rouse Equipment and Hand Tools.
No. 2 Band Saw
No. 40 Lead and Rule Cutter
Economy Vertical Miterer
Slug Clippers
Sennett Positive Assembler
Hand Miterer
Composing Stick
Newspaper Wall File
Register Quoins
Line Gauge
Make-Up Rule
H. B. ROUSE AND COMPANY
2214 N. Wayne Avenue, Chicago 14, Illinois

advance, cannot cancel or make last-minute changes. Nevertheless, r.o.p. deadlines are still closer to publication dates than those for magazines.

One Way Out

A possible solution to the mechanical difficulties in newspaper color reproduction was offered last fall when Robert B. Choate, publisher of the Boston *Herald-Traveler*, introduced a revolutionary new mechanical inserter called the Webtip (Tide—Nov. 29, 1946). The device tips and pastes pre-printed flat sheets of color reproductions onto newspaper pages as they run through the press. The reproductions can be made by any process on any grade of paper; the press can run at top speed.

The *Herald-Traveler* has tested the inserter with full press runs, and at the Newspaper Advertising Executives Association's convention in January Choate impressed the members with an off-the-record report. He proposes to make the machines available to other papers at about $7,000 apiece, but will sell only one inserter to each paper until every publisher who wants one gets it.

Economy

The greatest advantage of the device is economy. Advertisers can print color insertions in large quantities at a central source and distribute them to papers for application by the tip-on process. But although they are watching developments in Boston with interest, many publishers feel that the process is merely a temporary solution. In the long run, they say, newspapers will have to solve the mechanical difficulties and develop techniques for printing color effectively on newsprint.

Significantly, Choate himself has not lost sight of this goal, is also developing newsprint color printing along conventional lines. Couple of weeks ago his Boston *Herald* ran a full-page, four-color house ad promoting its fashion coverage, followed it with an insertion for a local department store. They were the first full-press-run, four-color r.o.p. advertisements ever carried by any New England newspaper.

What About Gravure?

Publishers generally agree, however, that letterpress color on newsprint will never approach magazine printing even with improved equipment and techniques. The answer, some believe, is switching to gravure or offset processes and to coated paper. The obvious objections, of course, are increased costs and the inevitable resistance from the mechanical unions.

Last fall, however, the St. Louis *Post Dispatch* started printing its weekly four-color comic section by gravure with startling results in brightness and clarity. A number of eastern dailies plan to follow suit when they can get the necessary equipment. And at least one midwestern paper admits it will not invest in new letterpress equipment because of the possibility that it will soon be obsolete even for r.o.p. printing.

Magazines long ago proved that color advertising attracts more attention than black & white; it provides better product identification and presents many special psychological appeals. These advantages are even greater in run-of-paper insertions because newspaper color is still a novelty. The NAEA'S color committee studied 5,000,000 inquiries from 3,500 advertisements of 163 firms and discovered that color insertions brought 53% greater direct returns than black & white. One advertiser reported to the Indianapolis *Times* that it got 35% more business through color ads than through black & white.

Most papers do little more than break even on color advertising. But they find that color increases general reader-appeal by brightening up the paper and helps sell more black & white advertising. Naturally, they hope it will help newspapers compete more effectively with other media for national advertising. The NAEA color committee, however, points out that the greatest potentialities of newspaper color advertising lie in the retail field.

Don Patterson, national advertising director of the Scripps-Howard newspapers, believes that regional advertisers are able to use newspaper color campaigns to best advantage. They can

350 to 400 lines per hour from each composing machine

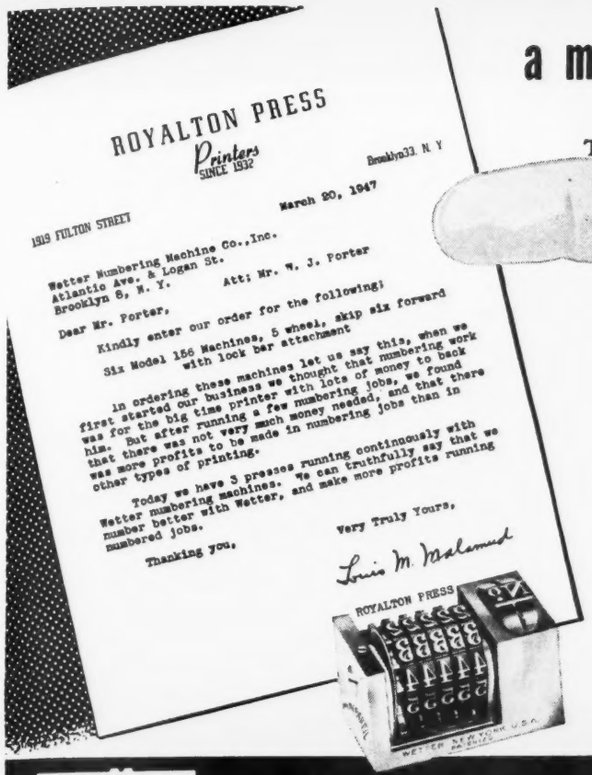
...when you use TELETYPESETTER

You can keep your composing machines going at capacity hour after hour! Just punch a tape on the Perforator—feed the tape into the Teletypesetter Operating Unit — and out pour the slugs *automatically*. Many users of Teletypesetter have boosted production of straight matter as much as 100% — have lowered costs and decreased errors. For full information, write to

TELETYPESETTER CORPORATION
1400 Wrightwood Ave., Chicago 14, Ill.

TELETYPESETTER
REG. U. S. PAT. OFFICE

a money-making idea that works


ROYALTON PRESS
Printers
SINCE 1932
Brooklyn33 N.Y.
1919 FULTON STREET
March 20, 1947

Wetter Numbering Machine Co.,Inc.
Atlantic Ave. & Logan St.
Brooklyn 8, N. Y. Att: Mr. W. J. Porter

Dear Mr. Porter,

Kindly enter our order for the following:

Six Model 156 Machines, 5 wheel, skip six forward with lock bar attachment

In ordering these machines let us say this, when we first started our business we thought that numbering work was for the big time printer with lots of money to back him. But after running a few numbering jobs, we found that there was not very much money needed, and that there was more profits to be made in numbering jobs than in other types of printing.

Today we have 3 presses running continuously with Wetter numbering machines. We can truthfully say that we number better with Wetter, and make more profits running numbered jobs.

Thanking you,

Very Truly Yours,

Louis M. Malamud

ROYALTON PRESS

This unsolicited letter tells a money-making story. It's a story that's *been told* many times before . . . a story smart printers *will tell* many times again.

Numbering is a profitable printing specialty that many printers overlook. Why not go after the business they're letting slip by? A small investment in a Wetter Numbering Machine or two will set you up to handle it. Wetter will gladly tell you about the many kinds of profitable numbered jobs and why Wetter machines number better.

Sorry, but the heavy accumulation of back orders still prevents putting new orders into immediate production. While every effort is being made to correct this condition it will be some time before Wetter can make the prompt deliveries to which users were once accustomed.

WETTER NONPARIEL . . . (One of Many Models)

2790

WETTER NUMBERING MACHINE CO. Atlantic Avenue & Logan Street, Brooklyn 8, N. Y.

SOLD BY ALL DEALERS AND BRANCHES OF A. T. F., INC.

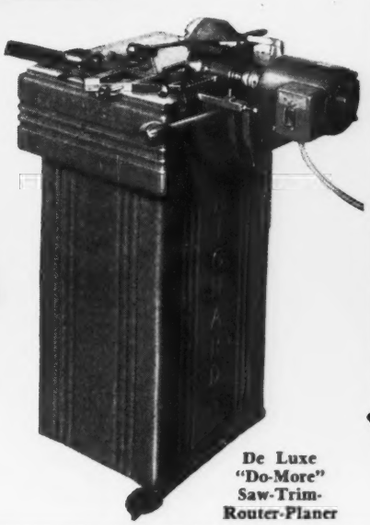
RICHARDS *leads the Parade*

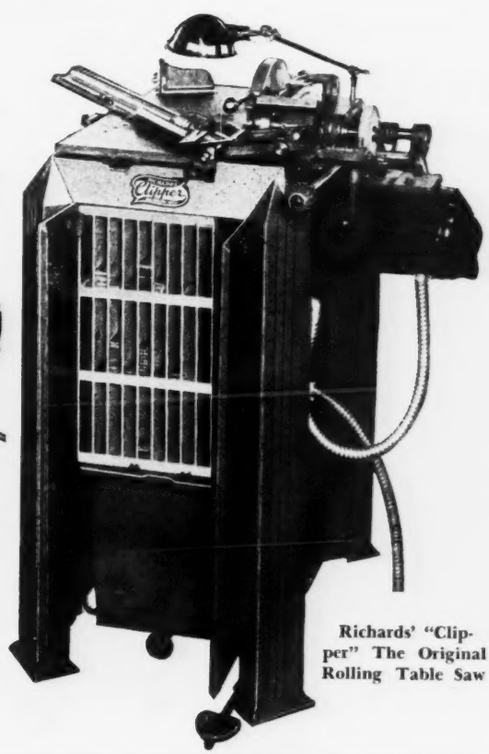
With Original Creations

SAWS
ROUTERS
MORTISERS

With Exclusive Patented Features

MULTIFORM RADIAL ROUTER
Heavy Duty Full Page Capacity. Also built in ½ page Junior Model.


De Luxe "Do-More" Saw-Trim-Router-Planer


Richards' "Clipper" The Original Rolling Table Saw

Write for descriptive literature on all machines.

J. A. RICHARDS CO.
Dept. 55 Kalamazoo, Mich.

achieve the impact of a national magazine campaign and still concentrate in a specific locality. On the same basis, of course, a national advertiser can use r.o.p. color to bolster a product in a weak area.

The problems of a national color campaign are the lack of uniform rates and minimum space requirements. Rates are based upon extra costs involved, such as additional time and labor, extra newsprint and inks—all of which vary with the individual papers. Some papers require a minimum of a full-page color insertion, some require 1,000 lines, some 800 lines or less and some list no minimum at all on space.

Last fall Scripps-Howard led the way toward standardization, adopted uniform rates (with a few exceptions) of 25% extra for one additional color, 35% for two and 40% for three colors and black. They also set a uniform minimum space requirements of 1,000 lines.

Case History

Probably the most ambitious national r.o.p. color campaign was run last fall by Schenley Distributors, Inc., for Schenley Reserve (via the Biow Co.). The medium was especially effective because the company was introducing a new trade character, the Schenley rooster, which was appearing in color in magazines, billboards and point of sale material.

It soon discovered, however, that many of the papers with color facilities were in what it considered minor markets and that some of them would not accept less than full-page color insertions. Schenley ran four different 1,000 line ads in four, three and two colors as available, in 67 papers on the list. It used black & white in 533 others. Later it decided there was not enough difference between three colors and two colors to warrant the difference in cost. It switched from three to two colors where four were not available.

Despite wide variations in ink shades and some trouble with poor register, Schenley says that the impact of the campaign was "terrific" and well worth the added cost. However it warns that since minimum space requirements are high, advertisers must have exceptionally large budgets to run full scale color campaigns without sacrificing frequency of insertion. But as the volume of r.o.p. color advertising increases, newspapers will be able to relax these restrictions and costs will come down.

As the result of a test campaign in 14 Scripps-Howard newspapers last fall, Sears, Roebuck now includes two-color mats (on request and at extra cost) in the monthly advertising proof books which it sends to its retail stores. Like Schenley, Sears found high costs and limited availability potent obstacles but reported higher pulling power.

The Pioneers

The Scripps-Howard Indianapolis *Times* participated in both campaigns. It drew from its own experience in making color plates, offered copy suggestions and provided information on availability of color facilities to help set up schedules. The *Times* began using r.o.p. color in 1934, increased its linage steadily up until the war. It has been especially successful in overcoming production difficulties, is currently concentrating on the development of color photography, which it feels is the coming thing in newspaper color advertising.

In 1946, despite newsprint limitations, the Indianapolis *Times* ran 480,838 lines of r.o.p. color advertising—4.05% of its total linage for the year, and more than any other U.S. daily.

Like the *Times*, the Milwaukee *Journal* has developed fairly successful production techniques and has pioneered in color photography. Last fall it created a stir in the field with a series of high fashion Kodachrome advertisements for a local retailer, the Boston Store.

Most of the Hearst papers have also had some experience with editorial color and they feel that as a group they will be in a relatively strong position when the long expected color advertising boom finally arrives. Currently Hearst's *Journal-American* is the only Manhattan daily equipped to print r.o.p. color. It has run some spot advertisements from time to time but has not done much recently because of the newsprint shortage.

Although it has run practically no r.o.p. color advertising since 1943, the Chicago *Tribune* preceded both the Indianapolis and Milwaukee papers in introducing color printing and was recognized as the leader in the field in the

EDES

EDES

EDES

EDES

Four Generations of EDES

EDES ENGRAVING METALS

Regular Zinc
Hard Matrix Zinc
Triplemetal
Copper
Brass
Gravure Sheets
Magnesium

Approaching its One Hundredth Year of service under the continuous ownership of the Edes family, the Edes Manufacturing Company continues its proudful tradition of producing—today, as yesterday—the *most uniform* and *dependable* Photo-Engravers' Metals in the world.

Founded 1850

THE EDES MANUFACTURING COMPANY
Plymouth, Massachusetts

THERE'S NO SUBSTITUTE FOR EXPERIENCE

Your Wood Flong representative is not "just a salesman" — he is a technician with long years of seasoned stereotyping experience behind him. His job is to advise and serve you at all times. He has the pioneers of the American dry mat industry behind him — an organization established in 1915 whose product is accepted by large and small dry mat users everywhere!

Your Wood Flong representative will be at the Convention

WOOD DRY MATS

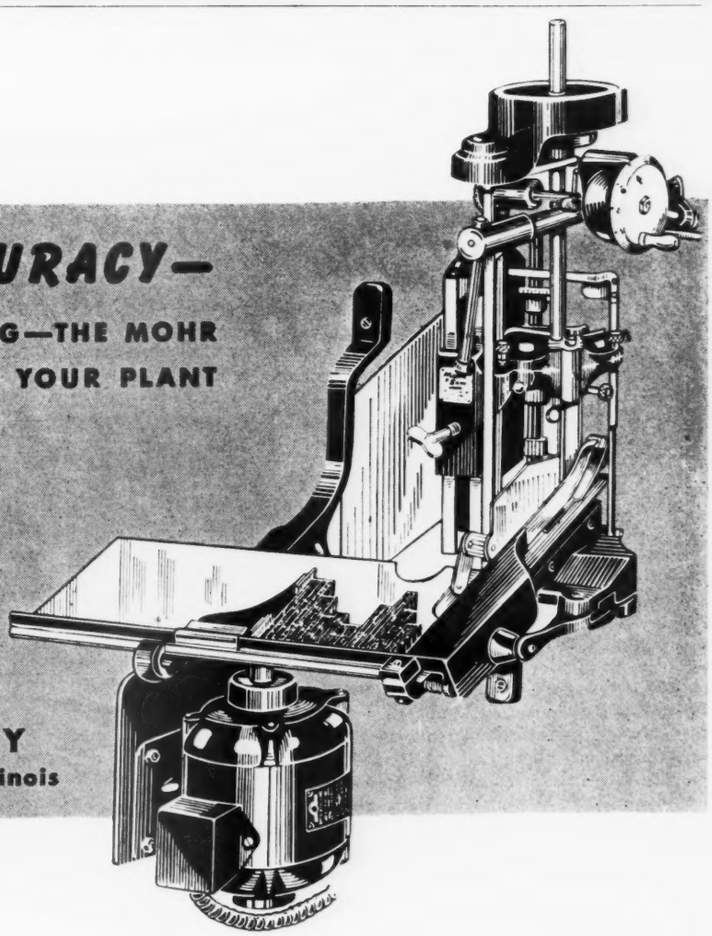
WOOD FLONG CORPORATION · HOOSICK FALLS, NEW YORK

New York City Office: 551 Fifth Avenue • New York 17, New York

SPEED PLUS ACCURACY—

100% AUTOMATIC SLUG SAWING—THE MOHR SAW WAY—WILL SAVE TIME IN YOUR PLANT

The Mohr Saw is instantly adjustable to cut slugs to any desired length as they are ejected from the line-casting machine. Operation is 100% automatic . . . accurate and speedy. • Ask for information on the Mohr Saw today. Find out how it can simplify the production of your odd-measure composition and save time and money for you.



MOHR LINO-SAW COMPANY
126 North Union Avenue · Chicago 6, Illinois

Thanks

WE wish to express our sincere thanks to friends and clients in the newspaper industry in Cincinnati, Columbus, Los Angeles, Louisville, Oklahoma City and other cities throughout the country. It is to these newspapers that credit must go for this nation-wide development of a comprehensive consulting service for the newspaper industry.

Newspaper Engineering Division

PLANT LAYOUT • MATERIAL HANDLING • MECHANIZATION
EQUIPMENT SPECIFICATION AND SELECTION • METHODS
MANPOWER DISTRIBUTION (mailroom, paper handling, bindery, commercial printing

Address inquiries to our Louisville office or contact us at the ANPA Mechanical Conference in the Palmer House, Chicago, June 8, 9, 10—Booth sixty.

Heyburn Bldg.
WA 0531
Louisville,
Kentucky

SERGE A. BIRN
Consulting Management Engineer

H. E. RUNION
Chief Engineer

Pioneering in the Independent Consultant approach to newspaper and printing plant problems.

early thirties. The *Tribune* ran its first r.o.p. color ad in 1929, by 1936 reached its peak of 173 full page color insertions for the year.

Tribune color advertising slumped after 1936 largely because of rising costs and equipment limitations and because the paper stopped promoting it aggressively. The *Tribune* did not lose interest in color, however, but continued to develop its techniques editorially even when wartime restrictions caused it to drop run-of-paper color advertising almost completely. Currently the *Tribune* prints a four-color page one cartoon daily, expects to resume color advertising as soon as the newsprint shortage eases.

A Colorful Future

The *Tribune's* aggressive publisher, Col. R. R. McCormick, once said that he learned his color lesson from the *Police Gazette*, which prints on pink paper to simulate flesh tones. In its early stages, while reproduction was still crude and sloppy, newspaper color may have borrowed its reputation from the *Police Gazette*, too; conservative labeled it cheap sensationalism. Sophisticated, *Vogue*-like fashion advertisements such as those run recently by the Milwaukee *Journal* show that color has come a long way since then. And the persistent voice of the advertiser indicates that it will go a long way in the future, and perhaps sooner than most people think.

New Equipment Installations

A 16-page Goss Unitube Press is being installed in the remodeled and enlarged plant of the Bedford (Ind.) *Daily Times-Mail*. The new press replaces a Duplex Model E flatbed which the *Times-Mail* has outgrown. A full complement of Goss stereotype equipment is included in the new set-up.

Since the war's end, The Goss Printing Press Co. has shipped 43 Cox-O-Type presses to purchasers in 20 states and seven foreign countries. Publisher-printers in the United States have received 31 of these 43 Cox-O-Types, and the remaining 12 have gone to foreign publishers. Cox-O-Type production has been increasing steadily since the end of hostilities and now exceeds pre-war levels, so that the back-log of orders for these flatbed web presses is being rapidly reduced, according to Goss officials.

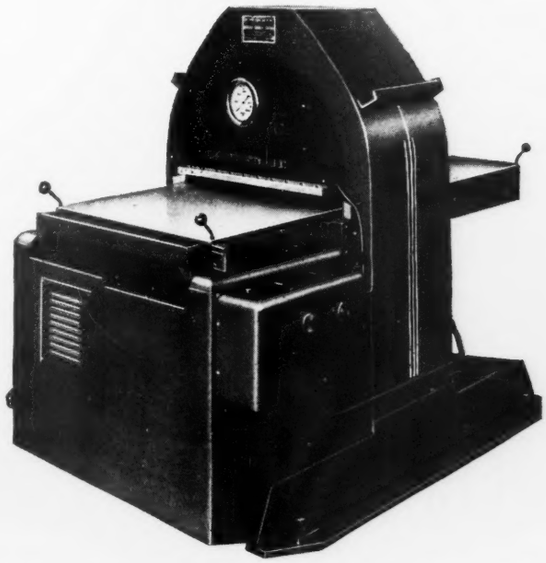
Griffin Brothers' new offset trade-composition shop, at 638 Sacramento St., San Francisco, Calif., is said to be the largest offset plant of its kind west of Chicago. It is equipped with ATF offset camera and platemaking equipment.

The

STEREOTEX

Hydraulic Matrix Press

will improve your printing beyond your fondest dreams.



The Stereotex System of molding the mat by TWO predetermined successive squeezes, one WITH and one WITHOUT blankets, produces a more uniform molded thickness of the mat than is obtainable by the conventional molding method. The second squeeze equalizes the thickness of the "floor" of the matrix so that it becomes substantially the same on type, rules, solids and halftones.

The resulting precision plates call for a hard packing which minimizes first impression offset and saves ink—all of which means *BETTER PRINTING.*

The successful application of the "double squeeze" molding system is made possible by—

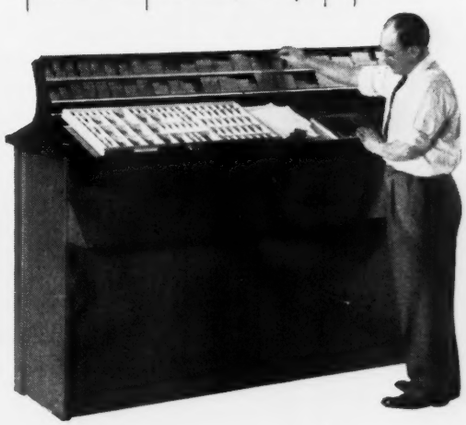
1. Extra large ram (32") which prevents any tilting or deflection of the platens under normal eccentric loads;
2. Individual controls for predetermining the right pressure for both squeezes;
3. "Proof press" accuracy of the press platens.

The Stereotex Press has greater pressure capacity (900 tons) than any competitive press and possesses many important exclusive features. There is nothing else like it—nothing else near it.

Talk it over with us at the A.N.P.A. Mech. Conference!

Stereotex Machinery Co.
Stamford, Conn.

HIS PRODUCTION GOES UP...
YOUR COSTS COME DOWN...
with
HAMILTON EQUIPMENT



● Daily production of your compositors is in ratio to their time at case and working bank, *assembling* type, rule, cuts and spacing materials. The more time they spend *hunting* for materials they need, the lower their production and the higher your costs.

Hamilton Cabinets, properly stocked, provide generous supplies of working materials in easy reach of every compositor. Your men spend *more* time at case and working bank . . . *less* time hunting for leads, slugs, rule, etc. With Hamilton Cabinets production goes up . . . your costs come down.

Hamilton equipment saves valuable floor space also, through careful engineering that eliminates waste space and makes possible greater production in smaller floor area.

Our new Catalog No. 23 illustrates Hamilton Type Cabinet Assemblies and optional arrangements for job and newspaper composing rooms. Ask your Hamilton dealer or write us for your free copy.

HAMILTON
MANUFACTURING COMPANY
TWO RIVERS, WISCONSIN

Lusty

is demand for letterpress type of rotary magazine press printing from electrotype plates, according to INS survey — Printing speeds stepped up — Complementary press equipment redesigned.

ORDERS for letterpress printing presses—the only type of press which utilizes electrotype relief printing plates—are steadily increasing according to a survey of leading press manufacturers. The manufacturers interviewed in a survey conducted by International News Service were R. Hoe & Co., Inc., New York, N. Y.; Harris-Seybold Co., Cleveland; Claybourn Div. of C. B. Cottrell & Sons Co., Milwaukee, Wis., and the Goss Printing Press Co., Chicago.

Curtis S. Crafts, Vice President and Chief Engineer of the Goss Printing Press Co., said his firm has orders for 10 letterpress type of printing presses for every one order for rotogravure presses. Goss is not constructing any offset presses.

R. Hoe & Co. advises that at the present time orders for letterpress presses designed to print with electrotype plates constitute about 35 per cent of the company's total business in the web press field. The orders cover twenty-three 64-page magazine presses—10 of these are for R. R. Donnelly and Sons; five are for Conde' Nast Publications, and the remainder for Time, Inc.; nine 24-cylinder special color presses are being built for the Hearst Corporation. The remainder of Hoe's web press business consists of approximately 50 per cent in orders for newspaper color-convertible presses (stereotype) and approximately 15 per cent in orders for multi-color and monotone rotogravure presses (intaglio).

Albert Halstead, jr., Western Sales Manager for Cottrell, said that sales for letterpress presses are backlogged to the extent that all orders on hand will not be completely filled for at least two and one-half years. He explained, however, that this backlog does not indicate a trend in consumer preference but that the company is trying to catch up on orders taken during wartime years when it was not making any presses at all for civilian use.

The manufacturers were queried as to their belief in the future of the electrotype letterpress and here are their replies:

John J. Sweeney, Southeastern District Manager for R. Hoe & Co.: "The electrotype letterpress press always will hold a major position in the printing industry. The speed and volume of printing, plus the quality of work of the electrotype press is such that I do not believe any other press will displace it. Electrotypers need not fear any other kind of printing cutting into their field."

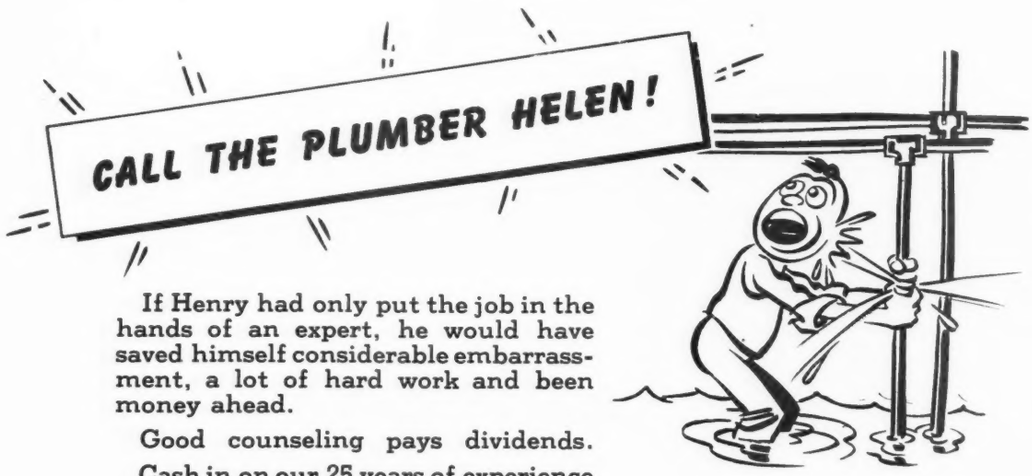
Curtis S. Crafts, Vice President and Chief Engineer of the Goss Printing Press Co.: "As far as the Goss Company is concerned, the letterpress type of press is way ahead of the rest in quality and quantity of type. Eighty per cent of commercial printing today is letterpress and I can see no reason why the future will be different."

R. J. Niederhauser, Advertising Manager of the Harris-Seybold Co. of Cleveland: "Although the trend is away from flatbed to rotary presses, there always will be a place for letterpress presses." Niederhauser said that although his company is only manufacturing offset presses for the balance of 1947, it planned extensive production of letterpress presses for next year.

Albert Halstead of Cottrell: "All letterpress manufacturers have large back orders of business. The magazine industry is pretty well sold on the letterpress type of printing."

Niederhauser said the new Harris-Seybold letterpress press will be streamlined with greater capacities and speeds. A large order for these presses has been placed by the Conde'-Nast Company which has 14 of the 16 two-color 43 by 59 presses which Harris-Seybold built nine years ago.

"These presses are used on top quality periodicals," Niederhauser said. "Our presses differ from conventional rotary letterpress presses in that we have an impression cylinder for each color, and the sheet is transferred from cylinder to cylinder by means of a transfer cylinder.



If Henry had only put the job in the hands of an expert, he would have saved himself considerable embarrassment, a lot of hard work and been money ahead.

Good counseling pays dividends.

Cash in on our 25 years of experience in handling printing and newspaper plants when buying or selling. List your plant with us today for sure results in selling. Let us know your needs if you are looking for a plant.

WE HANDLE THE SALE OF COMPLETE NEWSPAPER PLANTS

LIST WITH US TODAY!

We Buy and Sell Used . . .

Linotypes
Ludlows
Stereotype Equipment
Presses
Folders
Saws
Type Cabinets
Make-up Tables

The **M. L. ABRAMS** *Company*

Printing Machinery and Supplies

1639 SUPERIOR AVENUE **CLEVELAND 14, OHIO**

Vari-Typer* looks like a typewriter...is operated like one...has the same standard keyboard. And it's inexpensive. But that's where the resemblance ends. For Vari-Typer is a Composing Machine that gives you the professional variety, crispness of type-set matter, and clean appearance.

It's the changeable type that does it—over 300 styles and sizes. Each of these fonts is complete on a small individual metal segment. You can change fonts in a second or two from, let's say, an 19 point heavy gothic headline...to a 12 point bold subhead...to an attractive, compact 8 point text type. You can spice your copy with *italics*...you can space it as you like, horizontally and vertically.

Copy unrolled from Vari-Typer is sharp, clean reproduction copy, with automatically justified right and left margins. It is ready to run off in offset or duplicating machines. Ready to distribute the same day if you wish!

Vari-Typer often pays for itself in a few weeks ...then brings in steady profits. Its speed and flexibility make it ideal for booklets, promotion pieces, bulletins, forms, rate cards, price lists, form letters, questionnaires, house magazines, hundreds of other jobs.

Ask us for a free demonstration at your office or plant...write for a variety of Vari-Typed samples...to Dept. PE-6, Ralph C. Coxhead Corp., 333 Avenue of the Americas, New York 14.

Text copy set on Vari-Typer in the Bodoni Series.

**Reg. U.S. Pat. Off. & foreign countries Marca Registrada Marca Deposee*

Vari-Typer

Composing Machine

RALPH C. COXHEAD CORPORATION

DEPT. PE-6, 333 AVENUE OF THE AMERICAS, NEW YORK 14, N.Y.

DIRECTOMAT

The Choice of Leading Dailies for Precision Mat Molding

A few Directomat advantages:

★ DIRECTOMAT molding produces sharper, more uniform mats...makes possible the higher quality reproduction being demanded by advertisers and agencies.

★ With the DIRECTOMAT all color work and fine half-tone work can be molded and completely dried... without shrinkage...in a single operation.

★ The DIRECTOMAT eliminates stretch of mats...reduces chance of mat buckle...can produce dry mats with the same shrinkage you now get.

★ The DIRECTOMAT equipped for double-sided operation has the capacity of two mat rollers...requires the space of only one.

More and more DIRECTOMATS are being installed by leading dailies in the United States and abroad...because DIRECTOMATS are demonstrating day after day in actual newspaper plant service that they offer definite advantages over other methods and types of equipment. Nearly 150 DIRECTOMATS are already bringing these advantages...and others...to leading newspaper and commercial plants. If you are interested in these advantages—interested in improving reproduction today ...providing for R.O.P. color work now or later—write to Lake Erie for complete facts on the DIRECTOMAT.

LAKE ERIE ENGINEERING CORPORATION

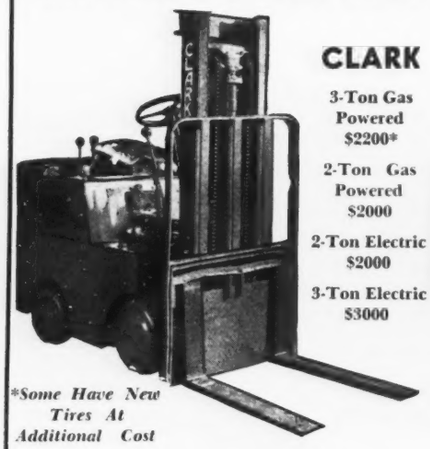
568 Woodward Ave., Buffalo 17, N. Y.

Offices in Principal Cities and Foreign Countries

LAKE ERIE
ENGINEERING CORP.
BUFFALO, N.Y. U.S.A.

Leading manufacturer of hydraulic presses—all sizes and types—stereotyping...plastic molding...processing...rubber vulcanizing...metal working...forging...metal extrusion...special purpose.

MATERIAL HANDLING EQUIPMENT FOR PRINTING PLANTS



CLARK

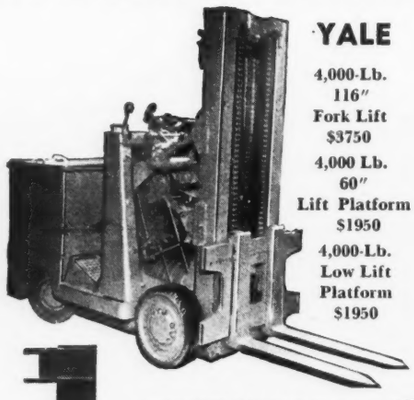
3-Ton Gas Powered $2200*

2-Ton Gas Powered $2000

2-Ton Electric $2000

3-Ton Electric $3000

**Some Have New Tires At Additional Cost*



YALE

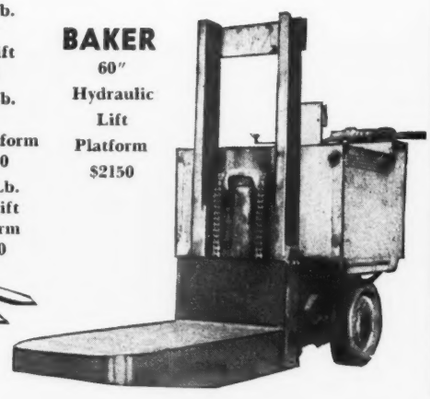
4,000-Lb. 116″ Fork Lift $3750

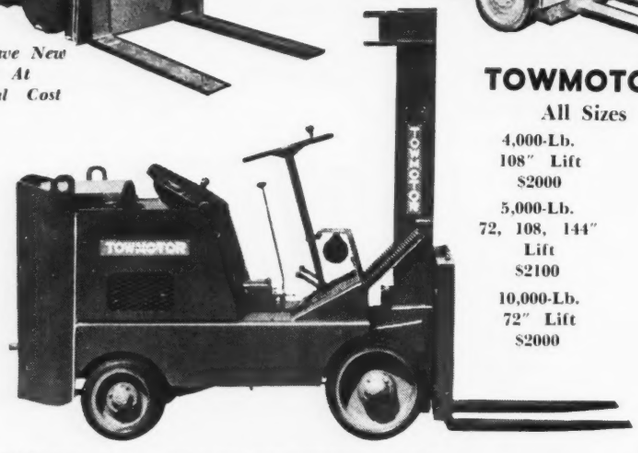
4,000 Lb. 60″ Lift Platform $1950

4,000-Lb. Low Lift Platform $1950

BAKER

60″ Hydraulic Lift Platform $2150





TOWMOTORS

All Sizes

4,000-Lb. 108″ Lift $2000

5,000-Lb. 72, 108, 144″ Lift $2100

10,000-Lb. 72″ Lift $2000

THESE VEHICLES HAVE ALL BEEN RECONDITIONED AND REFINISHED. THEY LOOK LIKE NEW AND ALL CARRY A NEW VEHICLE GUARANTEE

You Can Also Rent This Equipment By The Day, Week Or Month Using Your Own Operators

HARRY M. RIGHTER INC.

PHONE ATlantic 1631 CLEVELAND, O. FOOT OF W. 45TH ST.
Owned, Operated and Manned by VETERANS of WORLD WAR II

"The reason for this type of construction is that it reduces makeready time. This type of construction adapts itself very nicely to four and five color units with considerable time savings resulting in preparing a press for a run."

Speed is the goal of the letterpress press manufacturers in the form of improvements in inks and ink dryers. They seek higher running speeds with high quality finished paper.

Looking back, ten years ago, a web speed of 750 f.p.m. was considered exceedingly fast. Today, the new electrotype press is capable of printing 1200 f.p.m. For a press with cylinders 43 in. in circumference, this represents approximately 20,000 cylinder revolutions per hour and compares with a newspaper press of the same cylinder circumference printing at a speed of 40,000 papers per hour. This high speed made it necessary to make many changes in design and with a more rugged construction. Side frames and cylinders are machined from solid steel forgings. Heat treated steels have replaced bronze alloys and cast iron at many points.

Web leads and heater frames have been lengthened for more efficient ink drying, the size of water rollers has been increased, and cam actions have been revamped.

Folders have been completely redesigned to meet the higher speed; and the development of paper roll reels with automatic web tensioning and splicing equipment has been outstanding.

Color printing has been given prime consideration. The 64-page magazine press is basically designed to print up to 64-pages in two colors throughout, or up to 32 pages in four colors. On coated and smooth-finished papers rapid drying heat-set inks generally are used. When printing on newsprint or similar absorbent papers, news inks can be used and the heating equipment need not be operated.

None of the electrotype letterpress press manufacturers are planning any drastic changes.

Crafts advised that presses now being constructed by the Goss Company can be run at a rate of 1900 f.p.m. if the ink would dry fast enough. The only new developments in the presses themselves are minor changes in gearing and circulation of oil systems.

Sweeney said R. Hoe & Co. has dozens of patents pending for re-designs of letterpress presses. However, he refused to disclose details of the re-designs and the changes contained in them.

Halstead said Cottrell is waiting on the development of new feeders now on the drawing boards. He explained the new feeders can be put on all sheet presses and will speed them up considerably. Cottrell is the largest electrotype equipment manufacturer in the country and makes the majority of color presses in the magazine industry. It deals only in magazine and general commercial and label printing presses.

There have been many experiments with thinner and lighter plates, but that still is up to individual preferences. Sweeney explained that Hoe would adhere to the quarter-inch plate and said that thinner plates have proved inadequate in high speed work. *Electrotypers and Stereotypers Bulletin*, May 1947.

PIA Research

James F. Newcomb, president of Printing Industry of America, reported to the board of directors in April. About the management and technical research program that was outlined by the Public Printer at the Atlantic City convention he said:

"A RESEARCH program of the scope contemplated could only be undertaken by a national association, nationally financed. "This is a practical implementation of our desire to improve the industry's technology and industrial efficiency not only in terms of knowledge but in terms of application. Through this set-up we should be able as the research progresses to disseminate it down through the ranks to every printing plant in the United States and certainly to all PIA members.

"In an industry of so many small units as our own, it is not practical for the individual company to support substantial research on its own. PIA provides an ideal mechanism, whereby thousands of small firms can get benefits of major research program.

"The existence of a government printing office serving as a vast laboratory with a well trained technical staff gives us an advantage over most other industry groups in carrying out our research program."

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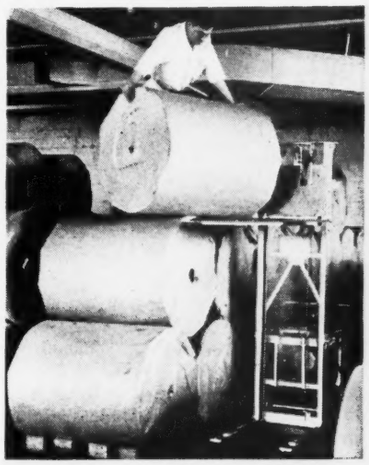

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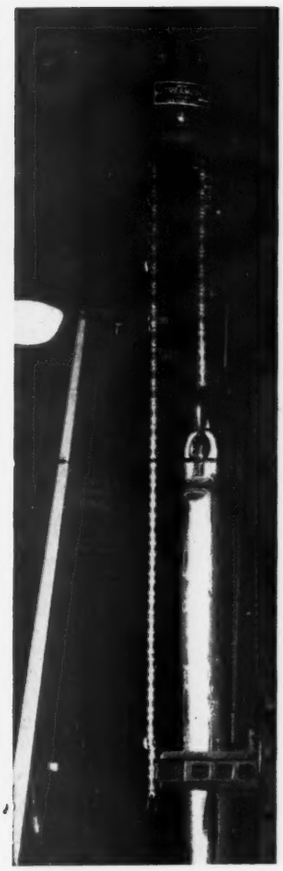

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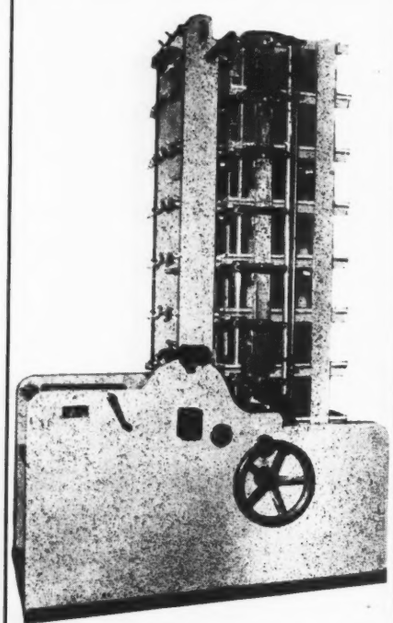

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Steam Set Inks—*What they are, their properties and something about printing technique*

By HERMAN A. SLATER*

**Production Manager, Chas. F. Brown Printing Co., Kansas City, Mo.*

STEAM-SET inks are a fundamentally different type. They do not oxidize nor utilize a solvent which must be driven off, as in oil inks. The elimination of offset, lack of odor, brilliance of color, non-rub characteristics and sealing properties have led to wider use in their particular field. Since many foods—butter, lard, bread and milk—show tendencies to pick up residual odors in printing inks, the lack of odor in steam-set ink is important. These inks consist of pigment, a resin binder and an odorless, high boiling organic solvent.

The resin is soluble in the solvent and in a mixture of the solvent and a limited quantity of water. However, it is insoluble in a mixture of the solvent and a greater quantity of water. When a film of the varnish formed from this resin and solvent is subjected to steam, a thin, hard film is formed. The small amount of moisture present in the air is usually sufficient to harden the outer surface of a thin, freshly printed film of steam-set ink in 10 to 20 min. However, when an excess of moisture in the form of steam is impinged on the outer film surface it hardens immediately. This thin, hard crust prevents offset and "stick" as the printing progresses into the delivery or rewind.

Wide variations in body and working properties can be obtained in these inks to make them suitable for many different papers, presses, and processing operations.

Offset Prevention

The primary motive for the creation of steam-set ink was to prevent offset immediately after printing. Offset is prevented by exposing the freshly printed sheet to a moist atmosphere higher in relative humidity than could be obtained in the pressroom. This is generally accomplished by impinging steam on the freshly printed sheet. It is not imperative that steam be used to prevent offset, but if none is applied, conventional methods commonly used to prevent offset should be observed.

Fast Drying

The top surface of a freshly printed film of steam-set ink hardens upon coming in contact with an excess of moisture. Moisture present in the air and/or the stock is usually adequate to dry a hard, tack-free film on coated book, sulphite bond, bleached manila, white patent coated, kraft, and similar stocks, in 10 to 20 min. When steam is impinged on a freshly printed film, the ink dries instantly.

Although steam-set ink dries exceedingly fast on the sheet it possesses a controllable water tolerance that prevents it from drying too fast on the press despite extreme humidity conditions in the pressroom.

Properties of Steam-Set Ink

Steam-set inks are compounded to be completely devoid of odor on the printed sheet. This is an essential factor in the food packaging industry. A few of the foods most easily affected by residual ink odors in printed matter are milk, lard, butter, shortening, meat, cakes, bread and cereals. Chewing gum, candy and tobacco, too may be affected when the wrapper carries an objectionable ink odor.

These inks give brilliance and cleanliness of color. This is due to the manner in which the ink film reflects light, and because metallic salts are not used.

The under layer of a printed film of steam-set ink is in a plastic state and has fine adhesive properties. The upper layer can be made hard and slippery. This characteristic gives a non-smear finish.

Steam-set ink does not skin because it does not contain drying catalysts and the ink is not subject to oxidation or solvent loss through volatility.

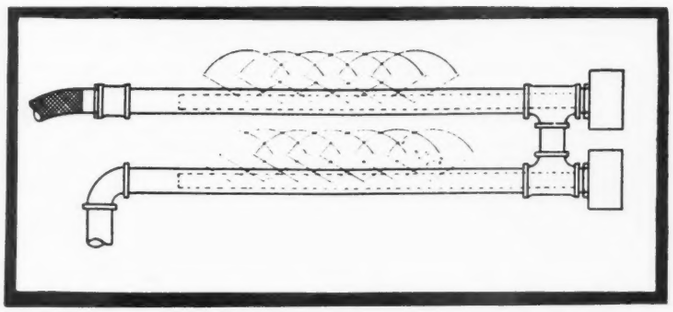

Fig. 1.—Diagram shows integral part of typical steam applicator for use with steam-set printing inks as used in the specialty field.

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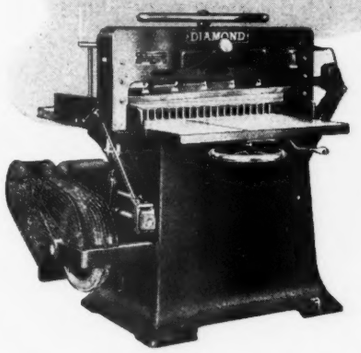

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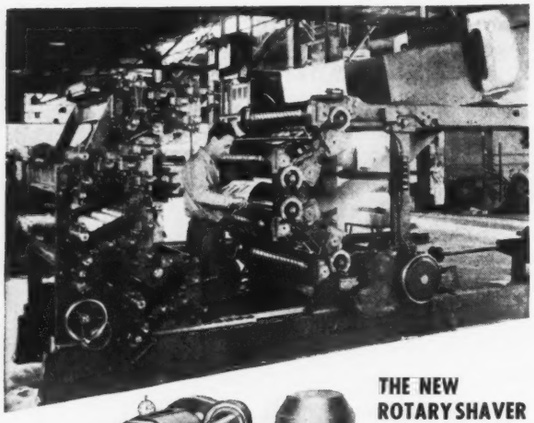

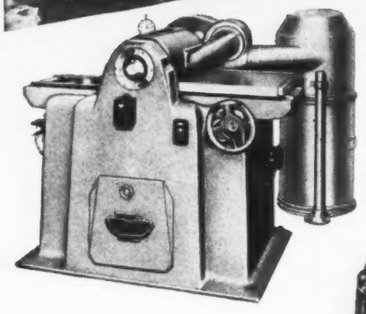

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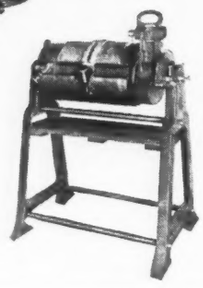

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A film of ink will remain "open" or receptive to another steam-set ink and can be overprinted within a reasonable time.

The surface tension of the varnish differs from that of conventional oil ink varnishes. Microscopic examination of prints indicates that these inks do not spread or bleed. Steam-set ink tends toward the complete coverage of each plate or type area.

Steam-set ink does not mix with wax applied in the processing of waxed stocks, and as a result permits an improved bond between two waxed surfaces when heat-sealed. All-over printed designs may be used on the wrappers.

Back-waxing can be eliminated with steam-set inks. The space and time required for storing rolls of printed paper are greatly reduced. Rewound rolls may be wound into tighter rolls without danger of offset. Tighter winding provides better control on succeeding slitting operations.

Paper Containers for Liquids

In the manufacture of containers for liquids and semi-liquids, such as milk bottles and ice cream containers, steam-set inks make it possible, without risk of offset, to print, diecut, strip, glue and coat in a continuous operation at high speed. Much of this type of printing is done with high-etch (relief) plates on offset presses with the dampening mechanism disengaged.

Carton and Setup Box Printing

The printing of folding carton and set-up boxes, even when run without steam but using the conventional means to prevent offset, permits carton printers to pile unracked lifts as high as press delivery will allow. In many instances, it is claimed, lifts can be transferred to the cutting presses a short time after printing, without risk of offset or smudge.

In addition, the drying characteristics permits unwaxed and unvarnished cartons to withstand rough handling and shipping abuse without excessive scratching or smutting.

Corrugated and Solid Fiber Board Printing

In plants printing corrugated and solid fiber boards where these inks are used, steam is not employed because there is ample moisture-content in these stocks.

Bag and Flexible Container Printing

Manufacturers of multiwall kraft bags, for example, when using steam-set inks with steam applicator, are enabled to put their products through tubing and bottoming operations immediately after printing.

Plates

Metal and rubber plates are suitable for use with steam-set inks. There is no tendency to injure rubber plates.

Rollers

Rubber or synthetic rollers must be used. Composition rollers are not suitable.

Steam Applicator

Steam-set ink will usually dry to a hard, tackfree film on most stocks in 10 to 20 minutes without drying apparatus. If a steam applicator is not used, however, conventional methods commonly employed to prevent offset should be observed.

When instantaneous drying is imperative, the press must be equipped with an applicator for the impingement of steam on the freshly printed sheet. (See Fig. 1.) Designs of various applicators with data on operation are available from manufacturers.

Inks must be formulated for the stock and press to be used. Characteristics of the form and other pertinent details should be available.

When changing from oil inks to steam-set ink, after the usual washup with kerosene or similar solvent, go over the fountain, rollers and form with alcohol to remove any greasy residue.

Rubber rollers that have been used for a long period with oil inks should be carefully washed by the above method and then coated with the ink. After the ink is thoroughly distributed for a period of time it should be washed up again with alcohol. This procedure will aid in

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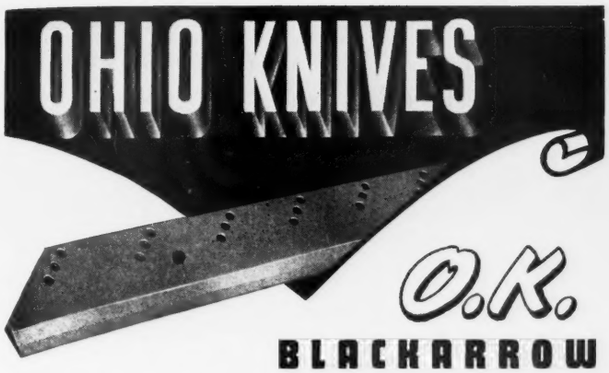

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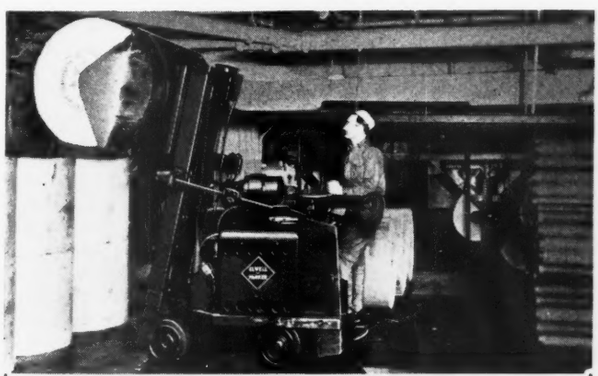

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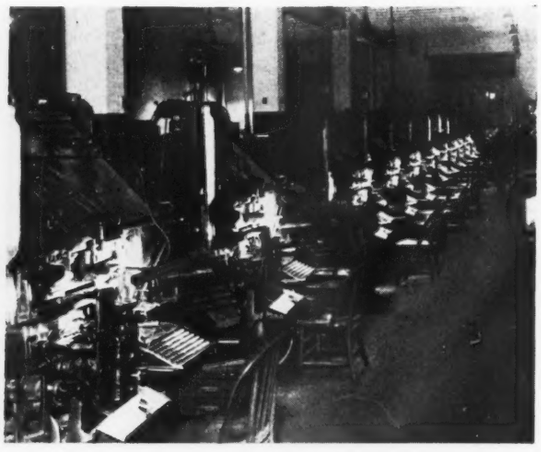

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removing all traces of oil ink held in the rollers.

To alter the shade of steam-set inks use steam-set bases and toners. Linseed or conventional bases or inks are not compatible with these inks. The addition of a special reducer is recommended when the ink tends to pick the sheet. If the steam applicator is not drying the film of ink, acceleration of drying may be stepped-up by the addition of a fast dry compound.

CONCRETE EVIDENCE

IN speaking before the Cleveland Craftsman's Club recently, Wm. J. Stevens, Secretary of the National Association of Photo - Lithographers presented concrete evidence of the utilization of the offset printing process in producing labels for nationally known products. Delving into his traveling bag, he threw out to the audience packages of cigarettes, canned vegetables, canned coffee, candy and other products. The labels on the containers were produced by the offset printing process.

Note—None of the packages were recovered by the speaker immediately following adjournment of the meeting.

Drying on the press can be retarded by the cautious addition and thorough mixing in the press fountain of a retarder compound. This compound can also be used satisfactorily on the ends of the rollers to prevent drying where ink works out beyond the printing form.

When the fountain is dyked off for running split colors, or for keeping the ink off roller ends, retarder compound can be used advantageously in that part of the fountain where the ink is eliminated.

Ordinary ink solvents or press washes such as kerosene or gasoline are not suitable. Solvents such as acetone, alcohol or carbitol acetate may be used satisfactorily.

If the ink "setsup" on an idle press, a press washup is not necessary. Run on fresh ink by turning the press over a few times and the ink will redissolve quickly.

On rotary presses, where possible, the impression should be taken off when the press is stopped. Otherwise the sheet may stick tightly to the form at point of contact and break the web upon starting. This is due to the rapid drying of the ink as it comes in contact with the paper.

When instantaneous drying is not necessary, it is not imperative that steam be used. Even without steam, steam-set inks dry more rapidly than oil inks. If no steam is applied to the ink film, normal conventional methods used to prevent offset and sticking should be observed. Steam applied after printing with these inks simply transforms steam-set ink from a fast-drying ink to an instantaneous drying ink.

Time Table in Color

President P. J. Neff of the Missouri Pacific Lines decided that railroad time tables were so drab and that something should be done about it. As a result two and four color process illustrations were used in the 96-page folder, and notes of interest to travelers were added.

The center spread is a colored map of Western United States. Each state is a different color. This is a great improvement over the usual black and white time table map. The map is easy to read and cities can be located at a glance.

From a strictly utilitarian piece of printed matter the Missouri Pacific Lines has created a lively folder with all the essential information.

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24 x 24, 12" Ram
Special Steam Jackets
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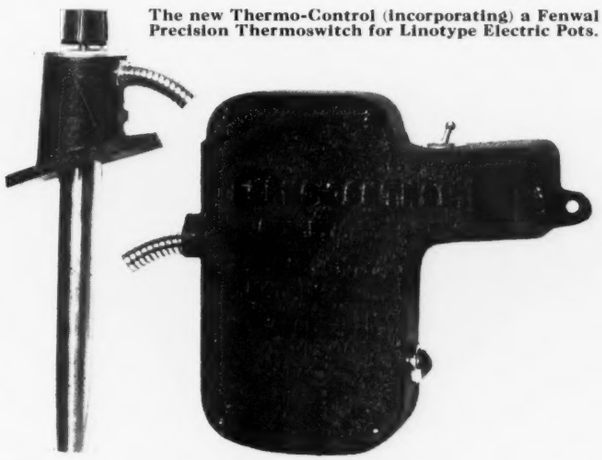

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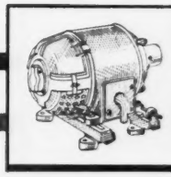

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This is a practical technical discussion of all platen and cylinder press operations in the commercial pressroom. The language used by the author is *your* language—the text is written simply and pertains to the operations actually performed in the pressroom.

To give an idea about the contents of the book we quote some of the chapter titles:

Methods of Line-up	Overcoming Offset
Presswork	Workups—Cause and Remedy
Makeready, Platen Presses	Slurs—Cause and Remedy
Makeready, Cylinder Presses	Repairing Plate Batters
Overlays and Makeready	Ink
Close Register	Color Mixing and Matching
Setting the Rollers	Metallic Inks

Some of the more unusual operations to many pressrooms are covered by the author in the following chapters:

Printing Water Color Jobs	Details of Embossing
Two Colors on One-Color Press	Hot-Plate Embossing and Paneling
Patent Base Speeds Imprint Jobs	Gum Label and Embossed Seal Printing
Printing on Cellophane	Die-Cutting Methods
Printing Facsimile Letters	The Stencil Screen Process

And much other valuable pressroom information. This book is bound in brown cloth, contains 236 pages, 6 in. by 9½ in., is well illustrated with line diagrams and a number of charts.

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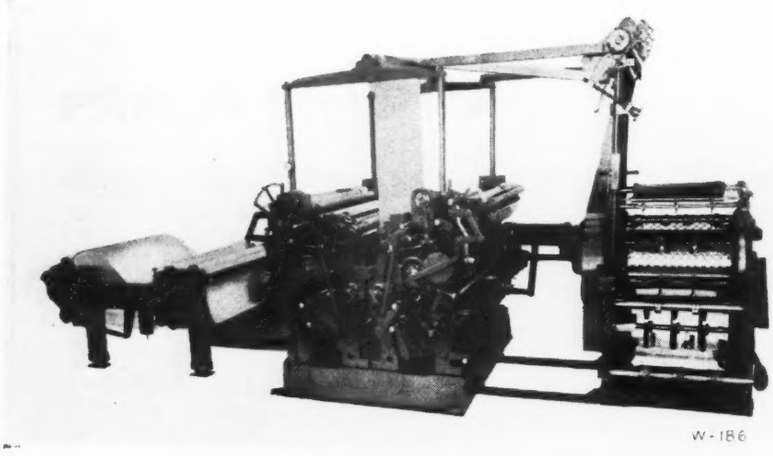
Printing Equipment *Engineer*

1276 West Third St.
Cleveland 13, Ohio



Web-offset Newspaper Press

A single unit special web offset newspaper press was recently completed by the Webendorfer Div. of American Type Founders, Inc., for a Philadelphia concern. Built to produce a standard 4-page newspaper or an 8-page tabloid, single color, the press prints both sides of the web simultaneously at speeds up to 12,000 cylinder revolutions per hr. The special folder on this machine also produces a 16-page signature 8¾ in. x 11⅜ in. or a 16-page signature 5 11/16 in. x 17½ in. Shown left to right, are a single roll stand with feed rollers, one perforating offset printing unit, and one newspaper type folder. The press takes a web of paper 35 in. wide and prints from a cylinder 22¾ in. in circumference. Automatic lubrication is provided for all main bearings.

Federated Metals Meeting

Plant superintendents and production executives of the Federated Metals Div., American Smelting & Refining Co., representing the management of that organization's 11 plants, convened at the Hotel Pennsylvania, New York, N. Y., on May 12 to discuss plant problems. John A. West, Manager of Technical Operations, and his staff, presided. The 11 Federated plant superintendents included: L. D. Alpert, San Francisco; C. T. Clore, St. Louis; L. C. Herlinger, Houston; A. F. Kohn, Jr., Los Angeles; W. C. Larson, Detroit; R. G. Lenhart, Pittsburgh; J. F. McQuillan, Perth Amboy; F. J. Menninger, Newark; A. S. Wigle, Whiting, Ill.; C. G. Heuter, Trenton; and J. Granberg, Beckemeyer, Ill. General responsibilities represented by: Tom R. Lister, chief engineer; F. J. Owen, standardization engineer; A. A. Smith, jr., supt. of the research dept.; Ray A. Quadt, research metallurgist; E. D. Mooney, service engineer; and A. E. St. John, manager of advertising and sales promotion.

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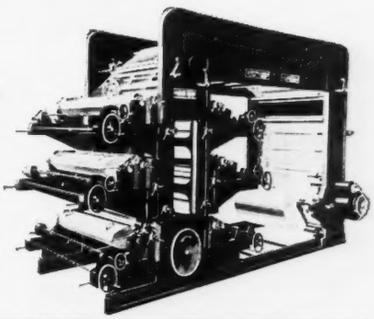

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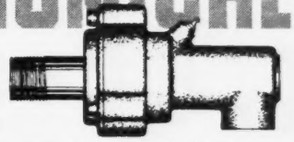

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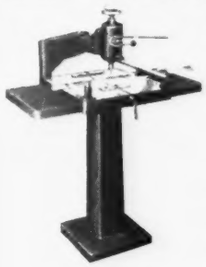

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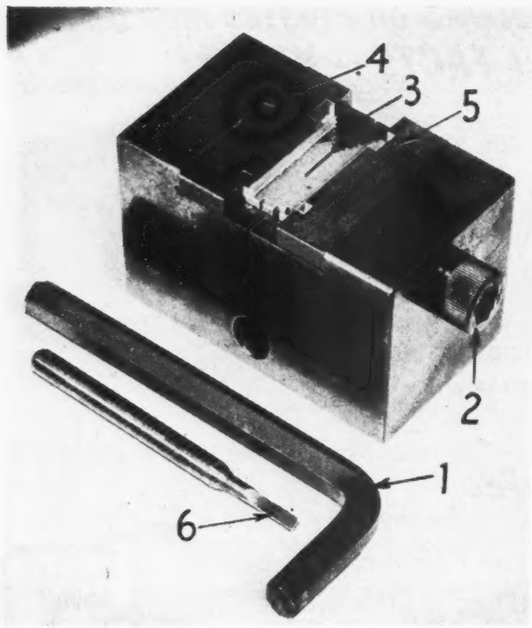


View of Matrix Lug Tool together with die-locking wrench and lug punch. May be used to bring worn upper and lower lugs of line-composing machine matrices back to original dimension.

Matrix Lug Tool

THE Shaffstall Matrix Lug Tool is designed to be used for reshaping all four lugs on worn line-composing machine matrices. The tool or block is substantially constructed of steel suitably hardened at the die areas to withstand repeated usage. The one-piece block body is split vertically as shown in the illustration to permit a slight springing movement of the left and right sections when the hexagon-shaped wrench *1* is applied to the socket of the knurled-head screw *2*. Tightening the screw holds the matrix *3* and the dies *4* and *5* firmly in place while the punch *6* is being struck with a light hammer to spread the worn lugs in the hardened steel die pieces *4* and *5*. When the screw *2* has been loosened, the die pieces and the matrix may be removed easily from the block.

The area immediately underneath each matrix lug is fitted with a hardened steel plug to prevent wear in the upper surface of the block. The block itself measures approx. 3 in. wide, by 1¾ in. by 1¾ in. Smooth finished in dark rust-resistant surface. After the machinist becomes familiar with use of the matrix lug tool, he should be able to swage the two lower matrix lugs in a minute's time or less.

Further information may be secured by addressing your request to *Printing Equipment Engineer*.

Combined Vacuum Cleaner and Blower

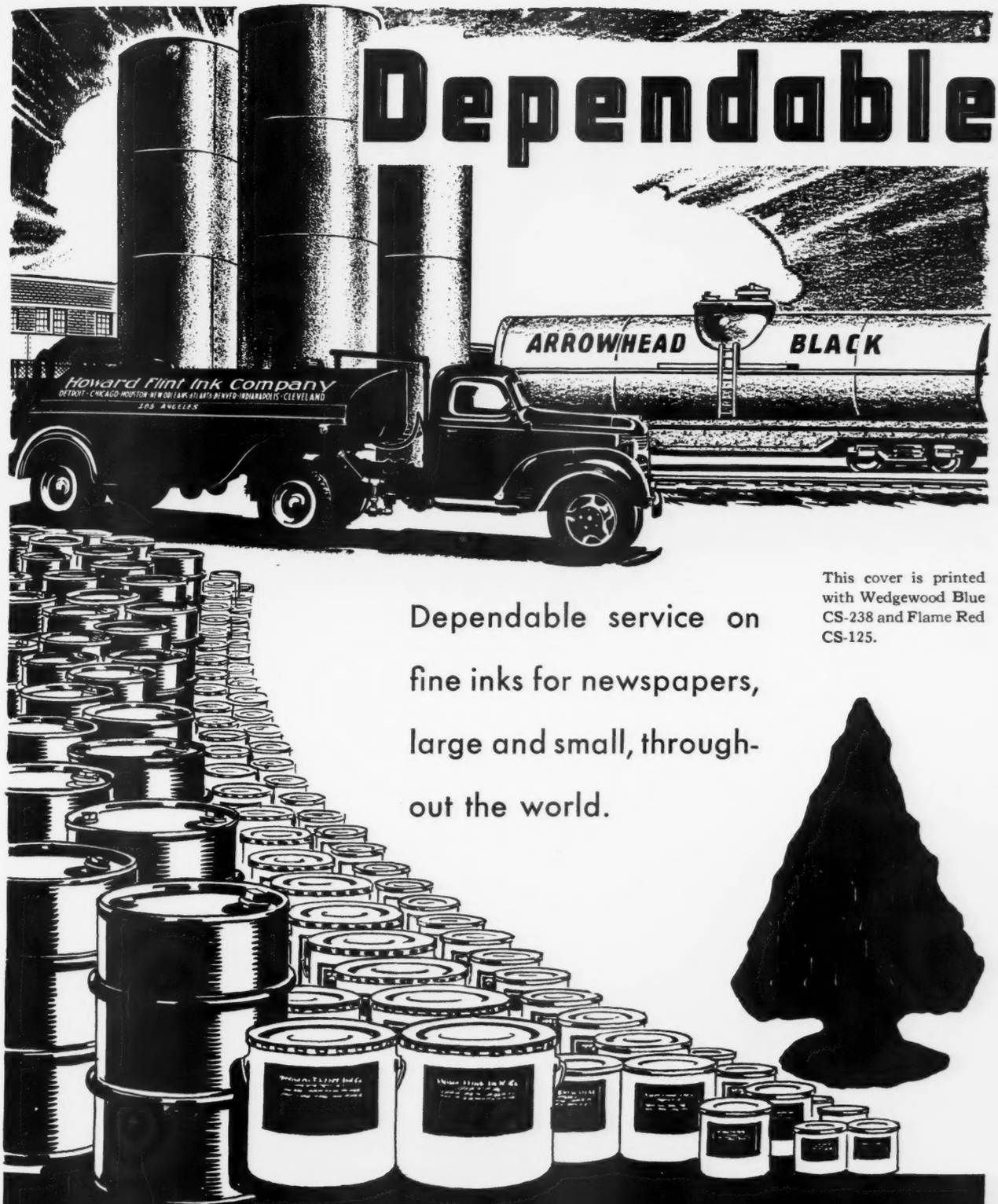
AN IMPROVED model of the Breuer Tornado Portable Industrial Vacuum Cleaner has been developed which can also be used as a portable hand blower. To use as a blower the motor-fan unit of the vacuum cleaner is removed by adjustment of two parts which are accessible at the top of the machine. Manufacturer claims this unit blows dry air at the rate of 295 m.p.h. which removes dust, dirt and sticky fuzz from motors, generators, shafting and similar equipment with hard-to reach places where dirt and dust accumulate to cause friction and fire-hazard. Returned to position on the vacuum cleaner and locked into place, it is available for suction cleaning. It is designed with the bag outside the tank. Lighter dust goes into the bag and heavy dirt, scraps and metal particles move directly into the 12 gal. steel tank, bypassing the suction fan to avoid breakage to moving parts. The cleaning power of 185 cu. ft. of air per min. with a 49 in. waterlift is secured by a 1 h.p. G-E universal motor. The unit weighs 40 lbs. Further information may be secured upon request to *Printing Equipment Engineer*.

At left is shown the Breuer Tornado Portable Industrial Vacuum Cleaner which can be used for suction cleaning. Lighter dust is collected in an outside bag and heavier particles are collected in the 12 gal. steel tank.

At right the operator has removed the hand blower and is cleaning the "innards" of a dirty machine.

ADVERTISERS' INDEX FOR JUNE 1947

Abrams, The M. L. Co. . . . 92
American Gas Association . . . 79
American Roller Co. . . . 33
American Steel Chase Co. . . . 102
American Type Founders, Inc. . . . 45
Atlantic Zinc Works . . . 83
Baum, Russell Ernest . . . 102
Beveridge Paper Co. . . . 12
Bingham's, Sam'l., Son, Mfg. Co. . . . 4
Birn, Serge A. . . . 90
Blatchford, E. W., Co. . . . 97
Booth, The E. A., Rubber Co. . . . 22
Breuer Electric Mfg. Co. . . . 103
Burgess Cellulose Co. . . . 6
Certified Dry Mat Co. . . . 43
Challenge Machinery Co., The . . . 97
Chemco Photoproducts Co. . . . 41
Cline Electric Mfg. Co. . . . 10-11
Consolidated Photo Engravers Equipment Co. . . . 74-75
Cottrell, C. B., & Sons Co. . . . 71
Coxhead, Ralph C., Corp. . . . 93
Cromwell Paper Co., The . . . 99
Dager Maniform Co. . . . 96
Dayton Rubber Mfg. Co. . . . 30
Deublin Co. . . . 103
Duplex Printing Press Co., The . . . 36-37
Eastern Newspaper Supply . . . 14
Economy Engineering Co. . . . 95
Edes Mfg. Co., The . . . 88
Elwell-Parker Electric Co., The . . . 99
Federated Metals, Div. of American Smelting & Refining Co. . . . 51
Fisher Furnace Co. . . . 44
Flint, Howard, Ink Co. . . . Inside Back Cover
Florence Pipe Foundry & Machine Co. . . . 26
General Electric Co. . . . 15
General Plate Makers Supply . . . 95
Goss Printing Press Co., The . . . 17
Hamilton Mfg. Co. . . . 91
Hammond Machinery Builders, Inc. . . . 49
Harris-Seybold Co. . . . Inside Front Cover
Heinrich, H. H., Inc. . . . 103
Herrick, William C., Ink Co., Inc. . . . 35
Hess & Barker . . . 98
Hoe, R., & Co. . . . 9
Huber, J. M., Inc. . . . 8
Ideal Roller & Mfg. Co. . . . 50
Imperial Type Metal Co. . . . 19-38
International Printing Div. of Interchemical Corp. . . . Insert between 40-41
Intertype Corp. . . . Outside Back Cover
Jampol Co., The . . . 81
Johnson, Chas. Eneu, & Co. . . . 46
Kansas City Matrix . . . 101
Kimble Electric, Div. of Miehle Printing Press & Mfg. Co. . . . 101
Lake Erie Engineering Corp. . . . 93
Lake Shore Electrotype Co. . . . 13
Lanston Monotype Machine Co. . . . 31
Linotype Parts Co. . . . 40
Ludlow Typograph Co. . . . 7
Matrix Contrast Corp. . . . 52
Mergenthaler Linotype Co. . . . 73
Miehle Printing Press & Mfg. Co. . . . 42
Miller Printing Machinery Co. . . . 1
Minnesota Mining & Mfg. Co. . . . 21
Mohr Lino-Saw Co. . . . 89
Monomelt Co. . . . 34
Morrill, Geo. H., Co., Div. of Sun Chemical Corp. . . . 24-25
Morrison, The, Co. . . . 23
New England Newspaper Supply Co. . . . 16
Nolan Corp. . . . 103
Ohio Knife Co. . . . 99
Pitman, Harold M., Co. . . . 100
Printing Machinery Div. of Electric Boat Co. . . . 18
Rapid Roller Co. . . . 33
Reid, William, Co. . . . 102
Richards, J. A., Co. . . . 87
Righter, Harry M., Inc. . . . 94
Rouse, H. B., & Co. . . . 84-85
Royle, John, & Sons . . . 101
Scott, Walter, & Co., Inc. . . . 20
SKF Industries, Inc. . . . 27
Sta-Hi Corp. . . . 2-3
Standard Tag Co. . . . 97
Star Cement Co. . . . 103
Stereotex Machinery Co. . . . 91
Streamline Metal Feeder Co. . . . 95
Superior Fixture Co. . . . 100
Syntron Co. . . . 99
Teletypesetter Corp. . . . 86
Tesch Mfg. Co. . . . 101
Timken Roller Bearing Co., The . . . 32
Tingue, Brown & Co. . . . 77
United American Metals Corp. . . . 48
Vandercook & Sons, Inc. . . . 82
Vulcan Proofing Co. . . . 47
Western Newspaper Union . . . 100
Wetter Numbering Machine Co. . . . 87
Wood Flong Corp. . . . 89
Wood Newspaper Machinery Corp. . . . 28-29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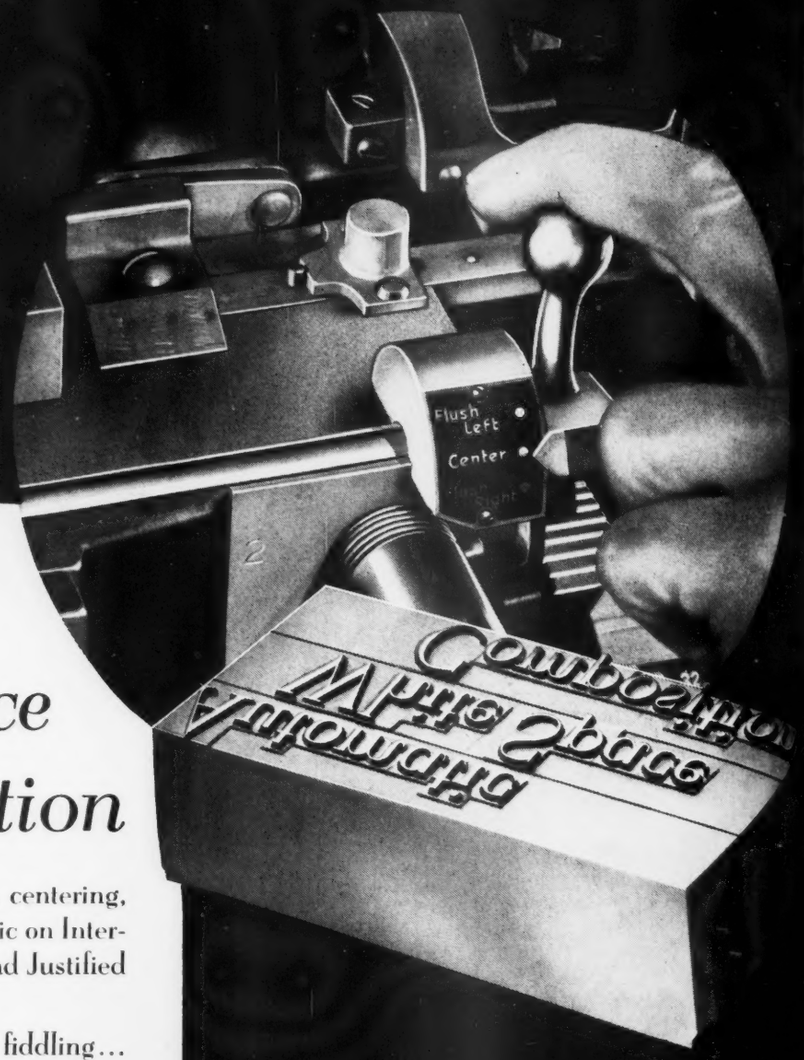

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